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IT portfolio management tools: Promise and pitfalls.

Why it's so hard to kill doomed IT projects.

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FEBRUARY 10, 2003 • VOL. 37 • NO. 6 • $5/COPY

$1.8B IT Rollout Is Rx for Kaiser

HMO halts internal medical records project with IBM, switches to commercial software

BY BOB BREWIN

Kaiser Permanente Health Plan Inc. last week announced a $1.8 billion project to deploy an automated medical records system for its 8.4 million members, its second attempt to use technology to eliminate paper-based charts and files.

Analysts said the new system, which is intended to be used by Kaiser's 11,000 physicians and their patients, would be the largest health care IT system ever developed outside the federal government in terms of cost, scale and scope.

Oakland, Calif.-based Kaiser, the largest nonprofit health maintenance organization in the U.S., plans to use software developed by Epic Systems Corp. in Madison, Wis., to store medical records electronically. Epic's software provides a repository that integrates all types of data, including patient charts, physician order entry forms, clinical notes, nursing documentation and pharmacy information.

Kaiser had previously worked with IBM to develop

Kaiser, page 57

PETE HORN

Play SQUEEZE

IN THEIR QUEST to come up with even more ways to wring out savings, IT leaders are exploring everything from striking barter agreements with vendors to reselling services and joining purchasing consortia. One example: Wyndham International CTO Mark Hedley (left) is considering swapping hotel rooms in return for computer equipment from hardware vendors. SEE PAGE 41

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IT Goes on a Mission

GPS/GIS Effort Helps Pinpoint Shuttle Debris

BY BOB BREWIN AND PATRICK THIBODEAU

Within hours of the space shuttle *Columbia*'s disintegration over East Texas, geographic information system departments at Stephen F. Austin State University in Nacogdoches, Texas, marshaled their researchers and students to help pinpoint the location of shuttle debris. Their ongoing work is expected to help investigators determine what went wrong.

The data collection effort is aiding the search by defining the path of the debris and narrowing the area to search, according to Darrel McDonald, director of the university's Humanities Undergraduate Environmental Sci-

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IT Cutbacks at NASA Raised Safety Concerns

BY DAN VERTON

NASA has a history of IT workforce management and funding problems that may have contributed to safety oversights, according to critics and independent government audits.

Of particular interest is a September 2001 report by the General Accounting Office, the investigative arm of Congress, that warned of potential safety problems stemming from engineering and IT staffing cutbacks that date back several years.

"The existing workforce was stretched thin to the point where many areas critical to shuttle safety, such as mechanical engineering, computer systems and software assurance en-

Cutbacks, page 7

Wants to view Web ..tes offline

Recognize any of those issues? Or, perhaps, all of them? If so. Many of those issues can be resolved by software. Fortunately, many of them can be Microsoft Windows® XP Professional

Want specific examples? Windows XP Professional offers new Remote Assistance, which lets you view a user's screen and control the user's computer to help you diagnose problems from afar. Office [illegible] lets

HTTPS, and FTP, which means you can install and maintain the suite directly from a Web server or a file share on your network. And finally, [illegible] features make [illegible] easier than ever. For more [illegible], visit microsoft.com/desktop

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Shuttle Investigation

For our latest coverage of the investigation into the space shuttle tragedy, visit our Web site. **QuickLink a2900**

If you'd like to share your thoughts on the search for answers, please head to our online discussion forum. **QuickLink a2910**

Our research section has more Web resources on *Columbia* and the shuttle program. **QuickLink a2000**

Steps to a Secure WLAN

MOBILE/WIRELESS: James Liu lays out his strategy on how to secure a WLAN and talks about problems with 802.11 that could complicate your plans. **QuickLink 36178**

Get More From Your Assets

OPERATING SYSTEMS: Avanade's technology infrastructure practice director Christopher Burry offers tips on wringing more efficiency from your IT infrastructure. **QuickLink 35099**

Courting the CIO

STORAGE: IT staff directors at the Federal Reserve Bank of New York offer advice on how to make sure your CIO doesn't take storage for granted. **QuickLink 35041**

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Debris

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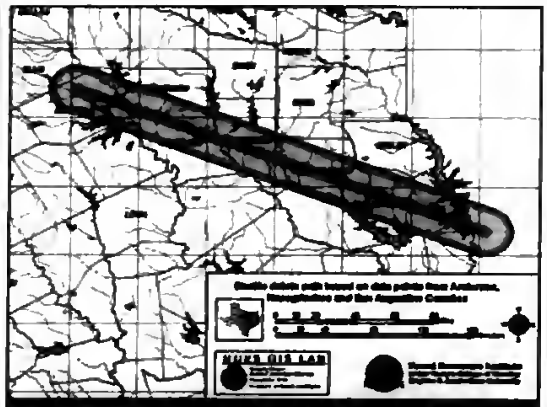

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Gary Jeffress, coordinator of geographic information science at Texas A&M University-Corpus Christi, said the shuttle investigators will likely use the location data to identify which parts of the shuttle disintegrated first in order to reconstruct the disaster. ◗

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BY LUCAS MEARIAN

NASA officials said last week that voice messages, video and photos being collected from the public are creating a data picture that will play a key role in determining the cause of the *Columbia* disaster. The trick will be managing that data.

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NASA is asking members of the public to send videos and photos of the shuttle breakup to an FTP site at **www.nasa.gov/columbia/COL_upload.html**.

"The public has been tremendously responsive. They've been responding to the Web sites; they've been responding to the hot lines," Robert Mirelson, chief of news and information at NASA headquarters in Washington, said during a press briefing last week.

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New Parts-Marking Technology Would Have Helped Investigators

BY JAIKUMAR VIJAYAN

A highly durable product-marking system approved for use by NASA in 2001 and currently being tested on the International Space Station would have helped investigators identify the debris from *Columbia*, had the technology been available when the orbiter was being built.

The 2-D marking system, called Data Matrix, is based on compressed symbology technology patented by a Canton, Mass.-based company called RVSI and released for use in the public domain.

The Data Matrix symbol is a checkerboardlike mark that's etched permanently onto a surface. The mark is scanned using a charge-coupled device or optical reader. It's similar to a bar code, but it's capable of storing up to 100 times more information than a bar code, RVSI officials said. Data Matrix symbols were designed to withstand extremely harsh conditions, said Donald Roxby, director of The Symbology Research Center, a Huntsville, Ala.-based unit of RVSI.

"Tests at Marshall [Space Flight Center] verified the mark would survive the 18,000-mile-per-hour slipstreams and temperatures in excess of 2,300 degrees" associated with orbiter re-entry, he said. "The symbols could sustain up to 30% damage and still provide 100% of the [encoded] data."

Jerry Berg, a spokesman for the Marshall Space Flight Center in Huntsville, said the organization was unable to comment because the official in charge of the Data Matrix effort was not available.

But since the 2-D etches are typically made during the manufacturing process, Roxby said, none of *Columbia*'s parts — except for three tiles that were recently replaced — carried the Data Matrix symbol.

The symbols would have made it easier for investigators to identify parts of the *Columbia* orbiter, he added.

Data Matrix symbols of various sizes and on different materials are being tested on the International Space Station to see how well they hold up in space, Roxby said. "The last photos we saw show these marks to be still in very good condition and readable," he said.

The goal behind marking parts in this manner was to improve NASA's ability to check the manufacturing history and operational data of parts use in a shuttle, said Erin Binder, a director at Golden Valley, Minn.-based Veritec Inc., another company that has also worked with NASA to develop a compressed symbology standard for marking shuttle parts.

Unlike bar codes, which don't work on certain surfaces and can peel off, compressed symbols like Data Matrix can be applied permanently to a variety of surfaces, Roxby said.

To mark the three tiles on *Columbia*, small recesses were etched out of each tile and filled with a ceramic paint that would melt permanently into the tile from the heat on re-entry, Roxby said. ◗

NASA Reinvents Troubled IT With Help of Private Sector

Space agency reaches out to improve mission software, business systems.

BY PATRICK THIBODEAU
WASHINGTON

THE *Columbia* disaster has confronted NASA at a time when the agency is working to move past a troubled IT history that includes canceling major business-system projects, being victimized by security breaches and dealing with software glitches that have doomed unmanned probes.

Two attempts by NASA to replace its disparate, proprietary business systems, which are used to manage its $15 billion budget, ended in failure. But just as disturbing for the agency was the software bug blamed for the loss of the Mars Polar Lander in 1999. "Software testing was inadequate," a NASA study said.

To address these problems, NASA is increasingly reaching out to the private sector for help to improve mission software and is adopting private-sector business practices and systems. Together, these efforts are changing the way NASA manages IT.

The space agency's largest IT project is its $644 million effort to create an enterprise backbone for finance, human resources and other business functions to replace its disparate systems.

NASA is using an enterprise resource planning system from SAP AG to build its backbone, adding business processes as modules, said Mike Mann, head of NASA's Integrated Financial Management Program. That's in contrast to the monolithic $186 million management system from KPMG Peat Marwick LLP (now BearingPoint Inc.) that NASA scrapped in 1999.

Moreover, the NASA inspector general early last year criticized the agency for poor IT security procedures, and NASA systems have been repeatedly hacked. Last August, for example, a hacker managed to obtain design documents pertaining to the next generation of reusable space vehicles [QuickLink 32042].

But NASA Acting CIO Paul A. Strassmann, who took the post last year, said the agency has made "remarkable progress." For instance, NASA's root server, one of the 13 servers worldwide that manage the Domain Name System, was one of only five to survive October's massive denial-of-service attack. The recent Slammer attack affected fewer than 40 of NASA's thousands of servers, and they were immediately identified and isolated, Strassmann said.

Although NASA is just catching up to private companies in modernizing business systems, it's playing a lead role in the development of highly dependable systems — software that tolerates hardware faults and security problems.

NASA has a history of leading in this area, but after the 1999 Mars Polar Lander failure, the agency knew it could benefit from private help, said Henry McDonald, who at the time headed the NASA Ames Research Center at Moffett Field in California.

McDonald last year spearheaded a $23 million dependable computing program in collaboration with Carnegie Mellon University. Pittsburgh-based Carnegie Mellon, a leader in the effort to improve software dependability, last month established a West Coast campus at Moffett Field.

The dependable computing initiative may ultimately help banks, hospitals and critical industries. "There are many, many applications that would benefit, and NASA is among those," said Jan Aikins, chief technologist for information sciences at Ames.

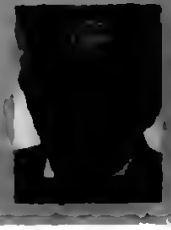
A Message From NASA's Acting CIO

Just hours after the Columbia disaster, NASA Acting CIO Paul A. Strassmann, a former Computerworld columnist, conveyed this message to Computerworld editor in chief Maryfran Johnson:

The NASA information systems family of more than 10,000 professionals and close to 15% of the total workforce are mourning for the loss of seven of our brave explorers.

To be a systems professional in NASA is more than just an occupation — it is a vocation with knowledge that our computers, networks and data are essential to pursue science and exploration to improve life on Earth, to extend life beyond our planet and to find life beyond. We are dedicated to do work that only NASA can do.

NASA has just submitted to the president a plan in which information technologies are highlighted as the enabling means to make NASA missions feasible. The loss of seven members of our family will only reinforce our commitment to deliver capabilities that are unmatched anywhere for safety, reliability and security. Those will be our best contributions in memories of Rick, Bill, Michael, Kalpana, David, Laurel and Ilan.



Continued from page 1

Cutbacks

gineering, were not sufficiently staffed by qualified workers," according to the GAO report, titled "Space Shuttle Safety."

One area of particular concern continues to be NASA's verification and validation (V&V) process.

Prior to the *Columbia* disaster, the GAO and the National Research Council criticized NASA for not using independent third parties to verify and validate software components critical to the safe operation of the space shuttle. As a result, NASA immediately stepped up its software V&V program, said Wil Williams, a spokesman for San Diego-based Titan Systems Corp. Titan, since 2001, has been responsible for testing commercial software for both the shuttle and ground systems.

But the comprehensiveness of Titan's work is unclear. Williams said Titan conducts V&V on contractor-produced software on "selected systems determined by NASA."

Donna Shirley, former manager of NASA's Mars Exploration Program and the team that built the Sojourner microrover, said third-party software validation was a hotly debated issue at the agency, but the decision may have come down to cost.

"For the reviewers to know enough about the systems they are reviewing to be useful, there is a considerable cost of education," said Shirley. "The shuttle software is so specialized that you would have to completely duplicate the shuttle computer systems for V&V to work. That would be incredibly expensive."

NASA officials were unable to comment on the issue by press time.

Lesson Unlearned

Diane Vaughan, a sociology professor at Boston College who has written extensively about NASA technology and the role it played in the 1986 space shuttle *Challenger* disaster, said that tragedy failed to compel NASA to bolster its workforce.

"At the time of the *Challenger* disaster, NASA was plagued by an inadequate budget and work cutbacks," said Vaughan. "When [previous NASA administrator] Dan Goldin came in after the *Challenger* disaster, his mantra was 'faster, cheaper, better.' And cheaper was very important."

Mike Mann, head of NASA's Integrated Financial Management Program, an agencywide IT re-engineering project, said various divisions have been downsized "significantly" over the past five years — anywhere from 25% to 40%.

"New tools were supposed to be one of the offsets to that reduction," Mann said, referring to enterprise systems. "We took the reductions because we were mandated to, and we didn't provide them with the new tools," he added.

Reporter Patrick Thibodeau contributed to this story.

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Debris

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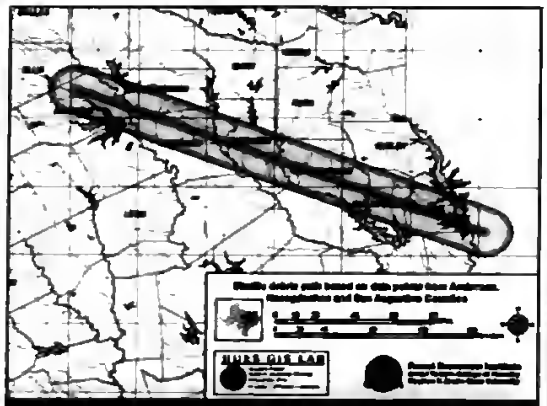

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The NASA information systems family of more than 10,000 professionals and close to 15% of the total workforce are mourning for the loss of seven of our brave explorers.

To be a systems professional in NASA is more than just an occupation — it is a vocation with knowledge that our computers, networks and data are essential to pursue science and exploration to improve life on Earth, to extend life beyond our planet and to find life beyond. We are dedicated to do work that only NASA can do.

NASA has just submitted to the president a plan in which information technologies are highlighted as the enabling means to make NASA missions feasible. The loss of seven members of our family will only reinforce our commitment to deliver capabilities that are unmatched anywhere for safety, reliability and security. Those will be our best contributions in memories of Rick, Bill, Michael, Kalpana, David, Laurel and Ilan.

Continued from page 1

Cutbacks

gineering, were not sufficiently staffed by qualified workers," according to the GAO report, titled "Space Shuttle Safety."

One area of particular concern continues to be NASA's verification and validatioo (V&V) process.

Prior to the *Columbia* disaster, the GAO and the National Research Council criticized NASA for not using independent third parties to verify and validate software components critical to the safe operation of the space shuttle. As a result, NASA immediately stepped up its software V&V program, said Wil Williams, a spokesman for San Diego-based Titan Systems Corp. Titan, since 2001, has been responsible for testing commercial software for both the shuttle and ground systems.

But the comprehensiveness of Titan's work is unclear. Williams said Titan conducts V&V on contractor-produced software on "selected systems determined by NASA."

Donna Shirley, former manager of NASA's Mars Exploration Program and the team that built the Sojourner microrover, said third-party software validation was a hotly debated issue at the agency, but the decision may have come down to cost.

"For the reviewers to know enough about the systems they are reviewing to be useful, there is a considerable cost of education," said Shirley. "The shuttle software is so specialized that you would have to completely duplicate the shuttle computer systems for V&V to work. That would be incredibly expensive."

NASA officials were unable to comment on the issue by press time.

Lesson Unlearned

Diane Vaughan, a sociology professor at Boston College who has written extensively about NASA technology and the role it played in the 1986 space shuttle *Challenger* disaster, said that tragedy failed to compel NASA to bolster its workforce.

"At the time of the *Challenger* disaster, NASA was plagued by an inadequate budget and work cutbacks," said Vaughan. "When [previous NASA administrator] Dan Goldin came in after the *Challenger* disaster, his mantra was 'faster, cheaper, better.' And cheaper was very important."

Mike Mann, head of NASA's Integrated Financial Management Program, an agencywide IT re-engineering project, said various divisions have been downsized "significantly" over the past five years — anywhere from 25% to 40%.

"New tools were supposed to be one of the offsets to that reduction," Mann said, referring to enterprise systems. "We took the reductions because we were mandated to, and we didn't provide them with the new tools," he added.

Reporter Patrick Thibodeau contributed to this story.

AT DEADLINE

Microsoft Releases Slammer Tools

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Bank to Cut IT, Back-Office Jobs

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Insurer Picks Perot For Outsourcing

Perot Systems Corp. in Plano, Texas, said it's negotiating a 10-year deal to manage IT and back-office business process operations at Blue Cross & Blue Shield of Rhode Island. About 600 of the Providence-based insurer's 1,740 workers will be offered jobs at Perot. The contract is expected to be worth at least $450 million, Perot said.

EDS Says Profit, Sales Down in Q4

Plano-based Electronic Data Systems Corp. reported net income of $360 million for the fourth quarter, down 11% from the year-earlier total of $405 million. Revenue dropped 5% to $5.5 billion, down from $5.8 billion. The IT services firm said it expects another year-over-year revenue decline this quarter.

MARK HALL • ON THE MARK

Teradata Steals Oracle's Data Mart Users . . .

. . . in a consolidation program. And Oracle Corp. has taken a bit of revenge. Teradata, a division of Dayton, Ohio-based NCR Corp., this week is announcing that it has successfully migrated more than 400 data marts into a few dozen Teradata data warehouses. And **"more than 75% of the data marts are Oracle,"** crows Vickie Farrell, vice president of Teradata warehouse marketing. Her company has put Oracle data marts in its crosshairs, developing technology training programs for Oracle users and specific data migration tools for Oracle 11i and wooing Oracle users at the annual conference run by the International Oracle Users Group (IOUG) for the past two years. Farrell said Teradata had already paid for booth space at this coming April's event, but just last week heard that **Oracle had asked the IOUG to refund its competitor's money and to ban it from the exhibitor's arena.** That's money from Oracle's users that Teradata would rather not get. • While on the subject of money and consolidation, by late March, Nexsan Technologies Inc. will be shipping its ATABeast disk vault system **with plenty of capacity and cheap enough to replace all** of your tape backup, nearline and online storage systems. According to Diamond Lauffin, senior executive vice president of the Woodland Hills, Calif.-based company, the 4U-high device comes packed with 42 256GB ATA disk drives. The fully configured machine gets you 10.5TB of capacity for a mere $42,000 — that's less than four-tenths of 1 cent per megabyte. Lauffin argues that disk-to-disk (D2D) products from his company and others will kill tape backup technology sooner rather than later. According to Steve Kenniston, an analyst at Enterprise Storage Group Inc. in Milford, Mass., "Nexsan is right on the sweet spot of disk-to-disk backup." Kenniston figures that **two factors keep tape backup systems alive against the incursion of D2D.** First, he says, is the high comfort level of aging systems administrators with tape technology. Second, government regulations and company policies about storing critical data offsite. In five years, he thinks, any technology, political or company issue will disappear. Along with tape. • **But will your browser vanish in the future** as well? Not in five years, but if more vendors follow the path being beaten by SRC Software Inc. in Portland, Ore., you'll probably be using it a lot less. Now in its 20th year, SRC sells budget planning and forecasting tools. Its I-Net Budgeting 9.2 product combines proprietary software with Microsoft Excel and SQL Server or Oracle databases. Right now, says co-founder and Executive Vice President Andrew Ferguson, remote users access the application through a browser running a Java client. But when the next version ships sometime in the second quarter, **users can skip the browser and go right to the Web in Excel.** So, will bean counters soon be surfing the Web in Excel? Don't count on it, says Ferguson. But you know they'll want to. • E-commerce sites may want to entice you to browse their sites using avatar technology from YaPanda Software Corp. The recently funded start-up is touting that **your avatar will make you immortal** because it can use your image and soon, your own voice coupled with a detailed knowledge base of your likes, dislikes, desires and phobias that can be shared when visiting any YaPanda-enabled site. While the value of having **Steve Ballmer's and Larry Ellison's avatars scurrying around the Web forever** is debatable, Anthony Carson, CTO and founder of the Chickasha, Okla.-based company, claims that e-commerce companies will be able to exploit the knowledge bases in each avatar for "extremely effective personalization." • A less-unnerving way to get close to your customers is through CRM. But deciding which CRM software is best for your company has always been an issue. On Feb. 19, Bethesda, Md.-based ISM Inc. will announce on its Web site the top 15 CRM packages. In case you didn't know, there are 171 to choose from. Up from 166 last year. **Now where's consolidation when you need it?**

Nortel Set for Switch Battle With Cisco

BY MATT HAMBLEN

Nortel Networks Ltd. today plans to unveil five new and upgraded switches for corporate users, a rollout that one analyst said should help the struggling vendor match offerings from Cisco Systems Inc. in competitive bidding battles.

Two of the new switches include virtual private network (VPN) functionality based on the Secure Sockets Layer (SSL) protocol, and all of the devices are focused on providing a company's employees, customers and business partners with secure Internet access to mission-critical applications, Nortel officials said.

The switches are designed to support "optimized connectivity over the Internet," rather than application access only within corporate intranets, said Greg Merritt, vice president of enterprise marketing at Nortel. Prices range from $7,000 to $32,000; the devices start shipping late this month.

Nortel last fall launched a new marketing strategy focused on mainstream users, in a bid to reduce its reliance on sales to telecommunications carriers [QuickLink 34057].

With today's rollout, Nortel is chasing remote-access business as SSL-based VPNs grow in popularity, said Joel Conover, an analyst at Current Analysis Inc. in Sterling, Va. He said Nortel is the first large vendor to embrace VPNs built around SSL but noted that Cisco is studying the technology.

Aside from the VPN functionality, all five Nortel products line up with Cisco's switches technologywise, Conover said. That could lead to price wars between Nortel and Cisco, which controls two-thirds of the global switching market, he said.

Nortel's rollout includes two Layer 7 switches for application traffic management, including one with SSL support; a high-end SSL routing switch; a routing switch for midsize users; and a data center aggregation device.

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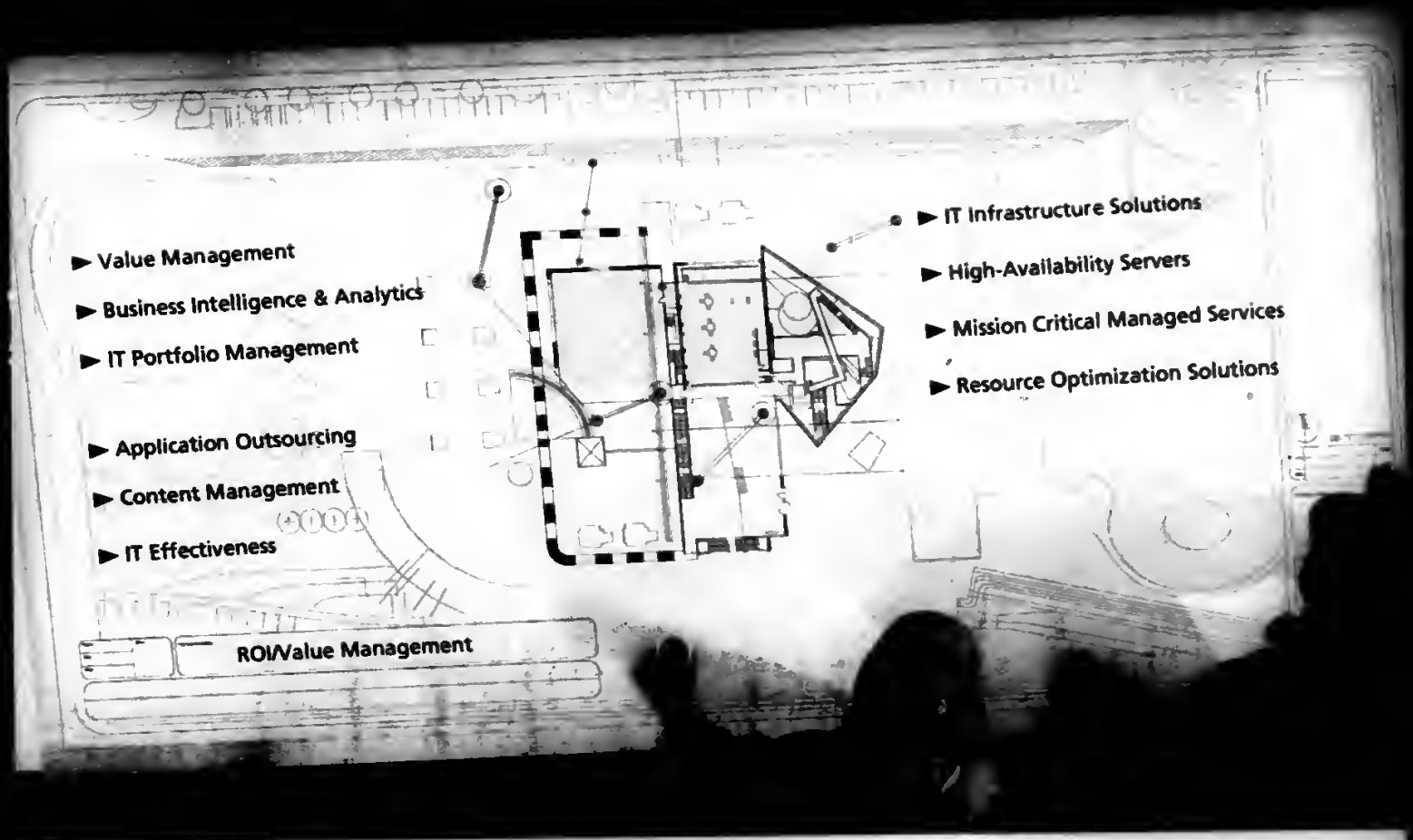

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BRIEFS

Windows XP Java Ruling Put on Hold

A federal appeals court in Richmond, Va., issued a stay order putting on hold a lower-court ruling that would require Microsoft Corp. to start offering Sun Microsystems Inc.'s Java software with Windows XP by early June. The appeals court's decision came just hours after Microsoft detailed the steps it planned to take to comply with the ruling in an antitrust lawsuit filed by Sun.

Microsoft Files Sendo Countersuit

In another case, Microsoft filed a countersuit against Sendo Ltd., a Birmingham, England-based mobile phone maker that in December charged the software vendor with stealing its intellectual property. Microsoft denied the allegation and claimed that Sendo broke a mobile phone development contract between the two companies.

Cisco Says Profits Up, Sales Down

Cisco Systems Inc. reported $991 million in profits for its second quarter, which ended Dec. 31, up 50% from $660 million in the same quarter last year. But revenue fell 2% to $4.7 billion, and Cisco CEO John Chambers said users are slowing down buying decisions because of continued economic concerns. Customers are even more cautious than they were three months ago, Chambers added.

Short Takes

SAP AG said Hasso Plattner, its co-chairman and CEO, has stepped away from daily operations and handed over software development to Shai Agassi, who had been in charge of new technology areas. . . . COMPUTER ASSOCIATES INTERNATIONAL INC. said it bought Netreon Inc., a Mountain View, Calif.-based developer of storage software.

Sun Technology Targets Low-End Server Market

Mass rollout includes blade servers, 12-CPU system, virtualization software

BY JAIKUMAR VIJAYAN

SUN MICROSYSTEMS Inc. today will announce a slew of hardware and software products aimed at lowering technology ownership costs and reducing complexity for users. The mass rollout also heralds a fresh assault by Sun on the low end of the server market.

The products are coming from several different business units at Sun and include a line of blade servers based on a mix of Intel Corp.'s chips and Sun's own UltraSPARC processors. Sun officials last week said the company will also unveil blade server virtualization software, a 12-processor midrange system and CPU upgrades for its high-end servers (see chart).

The agenda also includes price cuts that will reduce the cost of some high-end systems by as much as 35% and the addition of services aimed at helping users implement Sun's oew N1 data center resource-optimization technologies.

On the Offensive

The laundry list of announcements comes at a time wheo Sun, like its major server rivals, is trying to jump-start a business that has been slowed by the sluggish economy.

"They're trying to find new spots where they can make a few bucks while doing what they need to do to push their existing products out the door," said Charles King, an analyst at The Sageza Group Inc. in Mountain View, Calif.

Andy Ingram, a marketing vice presideot at Sun, said the product launch is designed to show that the company can deliver on the N1 vision with technology that reduces costs, complexity and the time it takes to get a return oo investment. Sun also wants to signal that it "is committed to competing in the low-end market really aggressively," he added.

The Sun Fire B1600 Blade Platform technology will lead Sun's charge at the low end. Although Sun is behind its top rivals in shipping blade servers, the B1600 devices offer enough differentiatioo to attract attentioo from users, said James Garden, an analyst at Technology Business Research Inc. in Hampton, N.H.

Sun is the first vendor to let users put blade devices based oo different processors in the same chassis, Garden said. The new servers also are the first hardware offered by Sun with support for N1 virtualization software that's designed to let IT managers quickly configure blade server farms.

Later this year, Sun said it will add specialized blade servers for IT security and content load-balancing uses.

Such capabilities should address some of the scaling and IT resource-utilization challenges users face wheo dealing with Web-based applications, said Craig Richardson, assistant vice president of hosting at Telus Corp.'s Business Solutions unit in Vancouver, British Columbia.

Telus is Canada's second-largest telecommunications company and one of Sun's biggest customers in that country. Richardson said the new blade servers will let Telus offer more efficient performance-scaling options to its large customers. And the support for putting both Intel and UltraSPARC chips in one box gives lower-end users more technology choices, he said.

The 12-CPU V1280 rack-optimized Unix server will top Sun's mass volume product line and was designed to be priced competitively with similar Wintel boxes, Ingram said.

The College of Oceanic and Atmospheric Sciences at Oregon State University in Corvallis is using the V1280 to consolidate 12 applications that were running on different servers and operating systems. "The system has given us a unified way to manage those processes," thereby reducing ownership costs, said Chuck Sears, manager of research computing at the university.

Sun is also boosting the performance of its high-end Sun Fire 12K and 15K servers by adding a 1.2-GHz UltraSPARC III chip to the systems. In addition, the company is dropping prices on some high-end configurations. For example, a Sun Fire 12K with four CPUs and 8GB of memory will now start at $551,987 instead of the current list price of $653,590. ◗

N1 Strategy Starts to Take Shape

The virtualization software for Sun's new blade servers is only the first in a series of products and services that the company plans to roll out this year as part of its N1 data center resource management strategy, according to Yael Zheng, a director in Sun's N1 business group.

In the second half of the year, Sun will release an enterprise version of the virtualization software that will let IT managers pool and allocate various computing resources, Zheng said. Like the blade server release, the enterprise edition will be based on technology Sun bought in November as part of its acquisition of Fremont, Calif.-based Terraspring Inc.

Sun is also working to deliver storage virtualization capabilities using technologies initially developed by Pirus Networks Inc., an Acton, Mass., company that Sun also purchased in November.

Atlanta-based Cingular Wireless is one of the early users pilot-testing N1 technologies, Zheng said. Under a multiphase implementation plan, she said, Cingular plans to use N1 software to pool a mix of computing and storage resources in a bid to reduce data center complexity and costs. Cingular will detail its N1 implementation plans as part of today's rollout.

Sun will also detail new N1-related services, including an $80,000 architecture assessment service aimed at helping companies figure out the transition requirements for using N1 tools in their data centers.

– Jaikumar Vijayan

Product Push

Sun plans to announce the following technologies:

SUN FIRE V1280 LOW-END SERVER: Supports up to 12 UltraSPARC CPUs and 96GB of memory, with prices starting at $127,495.

SUN FIRE B1600 BLADE PLATFORM: Supports Intel- and UltraSPARC-based blade servers in a single chassis. Intel blades will run Solaris and Linux; SPARC blades will run only Solaris. Prices start at $6,795.

N1 PROVISIONING SERVER 3.0 BLADES EDITION SOFTWARE: Virtualization tool for combining multiple blade servers into a shared processing resource that can be allocated to different applications as needed.

SUN STORAGE 3310: Network-attached storage device optimized for use with the blade server technology. Prices start at $35,995.

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Sun Says Java Will Support Key Web Services Standards

Delay in J2EE 1.4 shouldn't affect users adversely

BY CAROL ALIWA

DEVELOPERS who hoped that the Java 2 Platform, Enterprise Edition, would support guidelines that seek to ensure that Web services applications will interoperate got some good news last week.

Sun Microsystems Inc. announced that the new 1.4 version of Java 2 Enterprise Edition (J2EE) technologies will support the Web Services Interoperability Organization's (WS-I) Basic Profile 1.0, a set of rules specifying how to implement key Web services specifications.

Sun officials said support for the Basic Profile means that J2EE 1.4 will be delayed from the first quarter to the summer. But the delay is expected to impact only leading-edge corporate IT shops, since many companies have been slow to take up new J2EE features and build sophisticated Web services applications.

"Web services are becoming very important, but without standards support to ensure interoperability, they're worthless," said a developer at a large manufacturing company who asked not to be identified.

"Lately, the application server vendors have been delivering new versions faster than I would like, so the delay in the J2EE 1.4 spec is probably good news, from my perspective," he said.

A Step Forward

Tony Scott, chief technology officer at General Motors Corp., said J2EE 1.4's support for WS-I's guidelines is "a significant step in the right direction." He said GM is interested in Web services for a number of scenarios, including their potential to help the company reduce redundant business logic. GM is currently doing internal pilots and proofs of concept.

Scott said GM expects to use both Java and Microsoft Corp.'s .Net development environment for Web services, so interoperability will be important.

Willing to Wait

A development director at a large financial services firm that has been an early adopter of Web services called the J2EE 1.4 delay "unfortunate."

"But if this is the fastest way to get Web services support into the J2EE spec, then so be it," he said. "We will in the interim go with our own solution, but hopefully we won't end up with too much throwaway code."

The development director, who requested anonymity, said various vendors now support Web services, but because the technology isn't part of the J2EE specification, the vendors do their own extensions. "We would prefer to have it standardized so we won't be locked into a particular vendor's implementation," he said.

Ralph Galantine, a group marketing manager for Java Web services at Sun, said developers can now build Web services using the Java application programming interface for the XML-based remote procedure call, which has been made available with a number of application servers.

Mark Hapner, Sun's lead architect of J2EE, said it was a "big commitment" for vendors to pledge to build J2EE 1.4-compliant products that tightly conform to WS-I's Basic Profile 1.0.

Hapner, who is co-leader of the J2EE specification under the Java Community Process (JCP), said the expert group charged with evolving J2EE was unanimous in its support for the WS-I profile. Expert groups comprising representatives from various vendors are responsible for overseeing aspects of Java under the JCP, which Sun established in 1995 to develop and revise its Java technology.

Jason Bloomberg, an analyst at ZapThink LLC in Waltham, Mass., said the decision to support WS-I's basic profile shows that Sun is serious about its activity in the organization. While other major vendors signed up, Sun resisted joining WS-I for months, claiming that it deserved status as a founding member. Sun is now seeking a seat on the WS-I board of directors.

WS-I's membership includes major vendors such as Hewlett-Packard Co., IBM, Microsoft and Oracle Corp. and enterprise users such as Charles Schwab & Co. and Merrill Lynch & Co. ▶

SAP Users Welcome End of mySAP.com Era

Some say name change may help ease confusion

BY MARC L. SONGINI

The demise of SAP AG's mySAP.com brand name didn't provoke much mourning among users of the vendor's business applications last week. Several IT managers said the mySAP.com concept had remained somewhat mystifying, even after being in place for nearly four years.

"The whole mySAP.com positioning was very confusing, particularly to existing SAP customers like ourselves," said Tom Ackerman, senior director of business information systems at Symbol Technologies Inc., a maker of bar-code scanners and other handheld devices in Holtsville, N.Y.

Symbol, which uses SAP's R/3 enterprise resource planning (ERP) applications, is considering installing some of the vendor's newer products, such as its portal software. But IT staff members are still weighing the pros and cons of the software licensing scheme that was introduced as part of the mySAP.com strategy, and SAP hasn't done enough to make it clear how the pricing works, Ackerman said.

SAP late last month announced that it was changing the name of its software product line from mySAP.com to mySAP Business Suite. SAP America Inc. spokesman William Wohl said the reason was to better reflect the way corporate users buy software, which more and more frequently is done under a suite licensing arrangement.

Although Wohl said the mySAP.com launch in 1999 was a huge success, several users and analysts indicated that they found the concept to be either confusing or an example of marketing hype. From the beginning, many users weren't sure if mySAP.com was a new technology, a pricing program or just a new name.

"I always felt that mySAP.com was a marketing ploy to get everyone to think that SAP was Internet-friendly, and not a real plan that solved problems," said Eric Bloom, vice president of IT at Endo Pharmaceuticals Holdings Inc.

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> **ERIC BLOOM**, VP OF IT, ENDO PHARMACEUTICALS

Bloom, who is co-leader of the J2EE specification under in Chadds Ford, Pa.

MySAP.com "became increasingly confusing and not easily identifiable," eventually turning it into a liability for SAP, Bloom added. Even so, he said Endo's R/3 installation gives the company good value for its price.

"MySAP.com had its initial challenges in what the name said about the product," Wohl said, noting that the business of enterprise software is "inherently complex." But he begged to differ with the continued complaints about mySAP.com, citing the extensive adoption of the suite by users.

SAP's position got support from David Pritchard, ERP and customer relationship management program manager at Creo Inc., a supplier of digital prepress equipment in Vancouver, British Columbia. Pritchard said the mySAP.com scheme was fairly simple and direct. "Right from the outset 18 months ago, we have had simple bundled pricing, which includes all the mySAP.com functionality," he said. ▶

BRIEFS

Microsoft Pulls NT 4.0 Fix Off Site . . .

Microsoft Corp. pulled a software patch for Windows NT 4.0 from its Web site after users complained that the security fix was crashing the operating system. The company is updating the patch, which was released in December to plug a hole in the WM_TIMER function of Windows. There are no problems with similar patches for Windows 2000 and Windows XP, Microsoft said.

. . . and Posts New Patch For Browser

Microsoft also issued a new patch designed to fix a pair of flaws in the cross-domain security tools built into the Internet Explorer Web browser. The company gave the vulnerabilities a "critical" severity rating and said attackers could use them to run malicious code on vulnerable systems. In addition, it released a patch for a less-severe hole in a file access tool in Windows XP.

Comdex Owner Files for Chapter 11

Key3Media Group Inc., which runs Comdex and other IT conferences, filed for Chapter 11 bankruptcy protection as part of a deal designed to reduce its debt. The Los Angeles-based company said it hopes to emerge from Chapter 11 within 90 days. Thomas Weisel Capital Partners LP in San Francisco will provide new funding in return for 99% ownership of Key3Media.

Short Takes

WORLDCOM INC. said it plans to cut another 5,000 jobs, primarily corporate and administrative positions. . . . IBM and AMERICA ONLINE INC. said they're working to integrate their corporate instant messaging products so users can communicate without having to enter two passwords or maintain separate contact lists.

IBM Beta-Tests Virtual Database Technology

Users eye tools for integrating SQL databases, other content repositories

BY MARC L. SONDINI

IBM IS STARTING to beta-test two software tools designed to integrate distributed data repositories, and several users last week said the new technology could help them set up virtual databases that pull together a wide range of information.

The beta versions of IBM's DB2 Information Integrator and DB2 Information Integrator for Content software are the first tangible results of an iotegration initiative, code-named Xperanto, that the company detailed last month [QuickLink 35536].

IBM last week said the tools will let end users access various SQL databases and other cootent sources through a single query. For instance, DB2 Information Integrator could be used as part of a call center application to extract customer data stored in e-mail messages or text files. Commercial shipments are expected to start by year's end.

Expanded Data Sources

At Indiana University's campus in Indianapolis, the life sciences department is already installing DB2 Information Integrator, said Craig Stewart, director of research and academic computing.

The life sciences department currently uses IBM's DiscoveryLink software, a data cataloging tool for bioscience applications. But DB2 Information Integrator's native XML support will let the school's IT managers expand the types of data sources that can he queried, Stewart said.

Robert Catterall, director of strategic technology at CheckFree Corp.'s e-commerce divisioo in Norcross, Ga., said he's open to exploring the integration software, although he has no specific plans at this point.

CheckFree curreotly stores e-mail messages and attachments directly in IBM's DB2 database. But Catterall said the electronic billing services provider hopes to eventually create a virtual database that spans various repositories.

The integration technology is being built on top of DB2, but Nelson Mattos, director of information integration at IBM, said users won't have to move information out of existing repositories or convert data to DB2 formats. The software will also be tightly coupled with IBM's WebSphere MQ and WebSphere Business Integration middleware tools, but it will work with rival products from Microsoft Corp. and other companies, Mattos said.

James Governor, an analyst at RedMonk, a consulting firm in Hollis, N.H., said installing the integration software could cause culture shock for some database administrators. "Anyone in charge of a database hates anyone else touching it unless permission is given," Governor said.

HOW IT WORKS

IBM said DB2 Information Integrator could be used in the following way:

1) A customer of a financial services firm **goes online to seek data** on the current value of his investment portfolio.

2) The IBM software **pulls stock ownership information** from customer account data stored in a relational database.

3) DB2 Information Integrator **gathers real-time stock quotes** via a Web services application.

4) The tool **calculates the worth of the customer's holdings** and presents the data as if it came from a single source.

Microsoft Gains Visual Studio .Net Momentum

BY CAROL SLIWA

Microsoft Corp. this week will mark the one-year anniversary of its Visual Studio .Net development environment with a flurry of announcements intended to show momentum around its latest tools.

Partners such as Borland Software Corp. will pitch in with new offerings designed to work with the .Net development platform. Borland's Optimizeit for .Net can help developers spot memory leaks and other poteotial problems that can hinder applicatioo performance, said George Paolini, a general manager at Borland.

The Scotts Valley, Calif.-based tools vendor acquired the Optimizeit technology last year from San Jose-based Redline Software Inc., better known as VMGear.

Smaller vendors introducing new products at this week's VSLive conference in San Francisco include Sanctum Inc. in Santa Clara, Calif., which plans to announce AppScan Developer Edition. That product will integrate into Visual Studio .Net 2003, which is due for general release in April. AppScan, which will sell for $995, tests for security defects in code and provides descriptions of the problems and suggested fixes.

The level of interest in .Net-focused tools remains to be seen, since many Microsoft developers are just starting to switch to the new development environment.

Brian Siler, a lead programmer analyst at Hilton Hotels Corp. in Memphis, said his development group is about to enter the coding phase for its first .Net project. "The initial skepticism toward [Visual Basic] .Net is fading as we start to see how some of the oew language features will make our tasks easier," be said.

But a major concern is how to get the .Net Framework out to the company 's geographically dispersed end users. Since they're running Windows 2000 or XP with nonadministrative access, they can't install the framework on their own, Siler explained.

In other developer news, Borland this week will announce its Enterprise Studio 5 for Java, featuring integrated modeling technologies acquired from TogetherSoft Corp. Studio 5, which will sell for $6,999, also includes Borland's JBuilder tool, enterprise server and lightweight data store.

Last week, BEA Systems Inc. released two entry-level versions of its WebLogic application server. The Express version can be used for building and running Web applications that rely on Java Server Pages and Java servlets. The Workgroup Edition is for departments with up to 20 users oo projects that require full Java 2 Enterprise Editioo capabilities.

A development director at a large financial services firm who requested anonymity said lightweight application servers and opeo-source tools, such as the JBoss application server, appeal to his company. "Application servers are nearly a commodity item," he said, "and we expect the prices to he falling rapidly in the next year or so."

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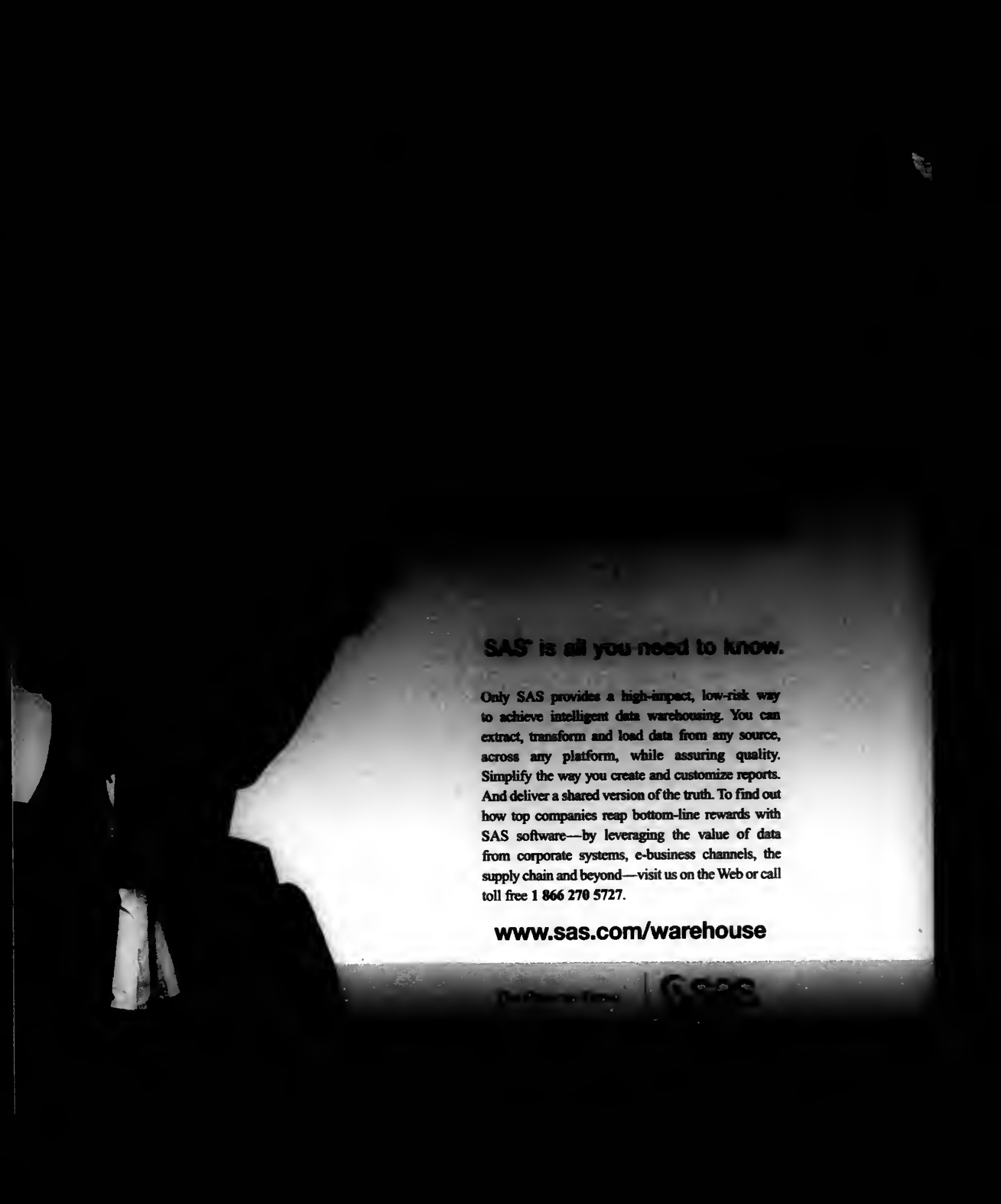
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Directory Links, New User Interface Due for NetWare

Novell plans to release upgrade of network operating system by midyear

BY MATT HAMBLEN

NOVELL INC. this week will announce plans for the next upgrade of NetWare, which will include a browser-based user portal, directory integration tools and an application server that supports Web services.

NetWare 6.5, code-named Nakoma, has been in closed beta-testing trials for months but is due to start a public beta period in April and begin shipping by midyear, said Novell product manager Rob Seely.

Seely last week listed 14 new features plus six improvements over NetWare 6.0 that are being developed as part of the upgrade. He focused primarily on a new Virtual Office user interface that combines Novell's previously released iFolder and iPrint Web services with new Virtual Team and eGuide functions. Virtual Office will let users print, access and manipulate documents from a customized Web browser and set up virtual teams that can collaborate via instant messaging, Seely said.

Directory Integration

EGuide previously was sold separately, but the latest version is being integrated with NetWare 6.5. With the help of Novell's DirXML metadirectory, eGuide will provide connectors to multiple directories, including Novell's eDirectory software and Microsoft Corp.'s Active Directory tool and Windows NT domains, Novell said. End users will be able to see all the directory information by providing a single password via Virtual Office.

NetWare 6.5 will also include new business continuity, Web services and open-source features, Seely said. For example, Novell is integrating its Java-based Extend application server software for use in Web services applications.

Beta tester George Raetzke, a senior systems programmer at Northern Illinois University (NIU) in Dekalb, hailed a server consolidation utility that's coming in NetWare 6.5. Raetzke said he wants to use the utility to set up a cluster of NetWare servers, which would result in a "huge savings in space for our labs."

NIU, which has 23,000 students, runs NetWare on about 75 servers but also uses Windows NT systems for Web functions, Raetzke said. He added that the school has installed both Active Directory and Novell Directory Services, an earlier version of eDirectory. EGuide and DirXML should help with integration between the directories, he said.

Another beta tester, Damon Dawson, a contractor for Computer Sciences Corp. who works as a network administrator at a large federal agency in Cincinnati, called the server consolidation tool a potential "lifesaver" for migrations to new server hardware. He also said a data backup tool that's due to be included in NetWare 6.5 will let IT administrators back up databases with no downtime — and do so during the workday instead of overnight for easier monitoring.

John Enck, an analyst at Gartner Inc. in Stamford, Conn., said Novell appears to be doing an "outstanding job" of enhancing the Web-based user interface that's in NetWare 6.0 to create Virtual Office. The promised integration between eDirectory and Active Directory is also an important feature for IT managers who need to support multiple directories, he said.

Enck said NetWare 6.5 may help Novell slow the software's market decline but only to a point. "It will help stop the bleeding, but no non-Novell customer will go running to 6.5 either," he said. ◗

Correction

Last week's cover story on mainframe Linux misidentified the employer of John Kogel. The company is Candle Corp. in El Segundo, Calif.

EMC's New Arrays Get Mixed Reviews

BY LUCAS MEARIAN

EMC Corp.'s new high-end Symmetrix disk array line was lauded by analysts last week as a technological advance that puts the struggling storage vendor back in the speeds-and-feeds lead. But some IT managers were more skeptical about the value of the arrays.

As expected, EMC unveiled its Symmetrix DMX800, DMX1000 and DMX2000 arrays and touted their internal architecture as being the fastest on the market by far [QuickLink 36043]. The Direct Matrix Architecture technology provides bandwidth of up to 64GB/sec., EMC confirmed.

With list prices ranging from $409,000 to $2.5 million, the DMX arrays are 15% to 50% less expensive than earlier Symmetrix models, EMC said. Those prices translate into costs of 4 to 8 cents per megabyte, according to Ken Steinhardt, the company's director of technology analysis. "Our objective is to be competitive," Steinhardt said.

But the price/performance improvements didn't wow Joe Gottron, CIO at Huntington Bancshares Inc. in Columbus, Ohio. Gottron has more than 20TB of capacity on a Symmetrix array he bought last year. He said he's not interested in the new line because he doesn't see a solid business case for buying the technology.

Paul Seay, a storage specialist at a large government contractor on the East Coast, said he views the DMX line merely as stopgap technology aimed at stemming user defections to rivals such as IBM and Hitachi Data Systems Corp.

Seay, who manages 48TB of storage on IBM's high-end Shark arrays plus data stored on EMC's Clariion midrange devices, said he was hoping EMC would roll out storage management software upgrades and increased multivendor interoperability.

"I thought EMC was going to be a software company, but they're so late to the game that I don't think they'll be able to break in at this point," he said.

Seay and Gottron also said they're disappointed that the DMX models don't include built-in support for IBM's Ficon mainframe connectivity technology, which is supported on older Symmetrix arrays.

Steinhardt said IBM is upgrading Ficon from 1G bit/sec. throughput to 2G bit/sec., so EMC saw no reason to link to the technology right away. Ficon support is due to be added in the third quarter, he said.

Jim Shaw, CIO at Management Science Associates Inc. (MSA) in Pittsburgh, was more positive about the DMX line. MSA has 30TB of capacity on four Symmetrix arrays and is testing the DMX800. Shaw said he likes the array's modularity because it will let him grow his storage capacity.

Shaw said he also appreciates the internal bandwidth boost. "We're getting noticeably better performance out of the [DMX] system," he said. ◗

Price Comparison

List prices for EMC's new Symmetrix DMX arrays vs. the cost of older models

■ DMX800 modular array with 2TB capacity	$439,000
■ Model 8530 single-bay array with the same capacity	$534,000
Difference in price	18%
■ DMX2000 dual-bay array with 18.5TB capacity	$1,465,000
■ Model 8830 single-bay array with the same capacity	$2,017,000
Difference in price	27%

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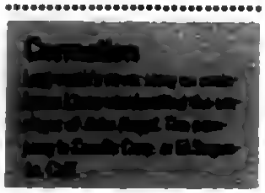

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2003

Prepare for the New Computing Landscape

IDC

COMPUTERWORLD PC WORLD

Sybase Seeks to Secure Mobile Data

BY MATT HAMBLEN

Sybase Inc.'s mobile software subsidiary last week announced a security tool that's designed to let network managers zap data from lost or stoleo laptop computers and Pocket PC handheld devices.

The Zap It feature is one of several enhancemeots that Dublin, Calif.-based iAnywhere Solutions Inc. is adding to its Manage Anywhere Studio software as part of an upgrade. IT managers can configure the security feature to erase sensitive data when systems are turned on without the proper passwords, according to iAnywhere officials.

Other new features include tools for remotely installing operating system updates, providing Web-based help desk support and tracking inventories of mobile devices and software packages, iAnywhere said. The Manage Anywhere Studio 5 upgrade is due to ship Feb. 28.

'Zap' Protection

"We've chained laptops to desks, but somebody will come along and use a bolt cutter to take one," said Ben Baker, IT manager at PDS Research Inc., a Louisville, Colo., company that coordinates pulmonary clinical testing for pharmaceutical companies. PDS plans to install iAnywhere's upgraded software on each new laptop it rolls out.

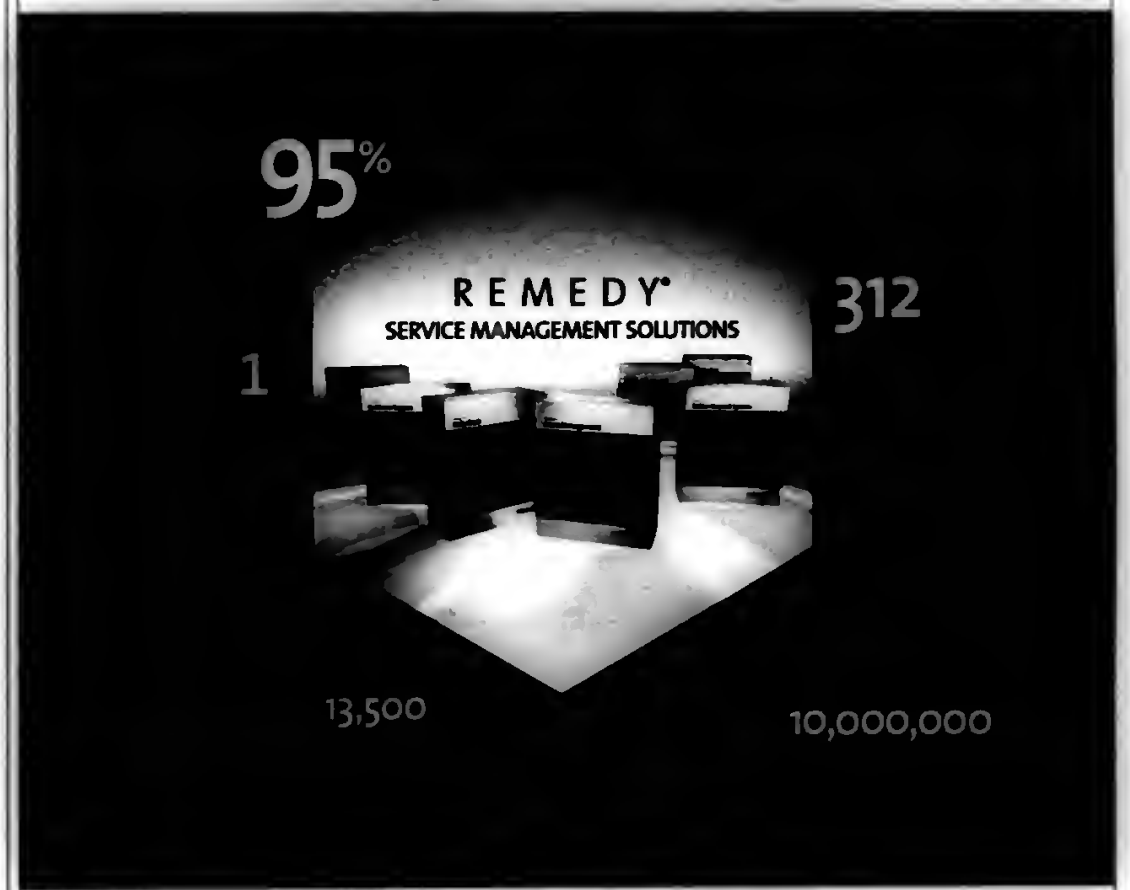
A lost laptop that cootains testing data about a new drug being developed by a PDS client could be worth millions of dollars to rival pharmaceutical makers, Baker said. IT staffers will set the Zap It feature to delete PDS's custom software and all the data connected to it if a user doesn't connect to the company's network within a prescribed period of time.

Features similar to Zap It have been added to a variety of products sold by iAnywhere's competitors during the past six months or so, said Stephen Drake, an analyst at IDC in Framingham, Mass.

For example, Research In Motioo Ltd. offers a data-deletion capability for use with its BlackBerry handhelds, according to Drake. XcelleNet Inc. and Synchrologic Inc. also sell mobile device management tools with "poisoo pill" functionality, he said.

"There's a real need to manage and administer mobile devices, especially the small devices that are much easier to lose," Drake noted. Despite a dip in the sale of handhelds in recent months [QuickLink 36045], IDC projects continued growth for software that can manage mobile devices, track hardware inventories and automate the distribution of software to end users.

Strength in Numbers.



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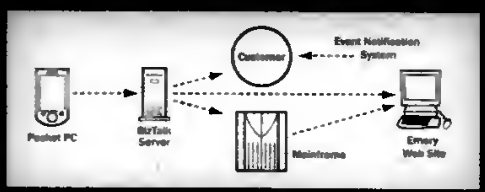

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PATRICIA KEEFE

Securing Credibility

THE SLAMMER WORM was aptly named. The critical fallout from the latest in a string of debilitating viruses slammed vendors and users alike, and rightly so. Users took a hit for not heeding endless warnings about the need to keep abreast of security patches, and vendors got smacked for shipping crappy software in the first place. The industry's credibility is on the line, and little wonder.

Slammer, if you've been hibernating, is a self-propagating worm that attacked a known and readily fixable vulnerability in Microsoft SQL 2000 Web servers on Jan. 25, spreading some 250 times faster than Code Red, according to a study released last week by a coalition of security experts.

Ever more advanced malicious programs, and the malcontents and showoffs who construct them, are going to continue to proliferate. That's a given, especially since the number of software vulnerabilities found in 2002 (2,524) rose 82% over 2001, according to security vendor Symantec's biannual "Incident Security Threat Report," which was released last week. Worse is the accelerating pace of new, smarter viruses — 7,000 in the past year [QuickLink 35428].

It should be clear that companies on both sides of the fence need to stop dithering and engage in some constructive action. And it should be obvious by now that IT users must employ preemptive measures and have disaster-response policies in place, ready to go at the first whiff of another viral onslaught.

You'd think that by now the long, sad history of vendor security missteps would be over. But it's become even more apparent that you can't rely on your software vendors. Despite Microsoft's bravado of a year ago, when it claimed that it was going to "lead the industry to a whole new level of trustworthiness in computing," it hasn't gotten very far. In fact, the company kicked off the year with several security alerts. It's alerts like these, and the ensuing parade of patches, that are driving users nuts.

Last week's Page One story "Unprepared Firms Slammed" [QuickLink 36044] showed that it's difficult for strapped IT departments to keep up, due to a lack of time, money or staff. And it doesn't help when the patches come packing their own peck of trouble. Last week, Microsoft had to pull a security patch for Windows NT 4.0 because it was crashing the operating system it was supposed to be helping. But don't think that Microsoft is alone in bedeviling IT in this manner. It isn't.

It seems everyone has something to prove on the security front. We're hearing rumblings of an IT credibility gap, usually pegged to Y2k expenditures, dot-com blunders and unrealized ROI from huge projects like ERP. You could argue that the security issue casts a longer shadow over IT's effectiveness. It's certainly more immediate, and its impact is felt from the boardroom to the desktop.

Yet no one group can stand alone when it comes to combating cybercrime and boosting its credibility. IT needs better products, fewer fixes and easier-to-use patches from vendors. Vendors need IT to use the tools that are already available and to close the door behind known vulnerabilities. The government needs IT to report attacks, formulate and enact security policies, and join the effort to demand certification standards for security products.

Companies absolutely need Internet access and reliable systems. All parties must act in synchronicity. Unless we all work together, we may find ourselves caught up in a viral spiral, hardly able to work at all. ▶

PIMM FOX

PlaceWare Deal Still Leaves Gap

MICROSOFT'S purchase of PlaceWare Inc. is an effort to supplement the company's meager offerings in collaboratioo technology. But it doeso't answer the question about how Microsoft will satisfy the on-premise, enterprisewide collaboration needs of Windows users. PlaceWare is a hosted service for which users pay a fee.

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Providing on-premise technology makes sense for some users because it cao pusb the cost down to pennies per minute. Most collaboration technology decisions are made at the departmental level. But by having a single, in-bouse standard, businesses can more effectively use their corporate purchasing power.

Sure, some companies are better off renting collaboration tools on an ad hoc basis from WebEx, PlaceWare, Raindance and others because of relatively low usage levels or because those services don't need to integrate with corporate applications. For them, there's little value in an enterprise-level collaboration system.

But for those that are plotting an overall collaboration strategy (for example, to integrate in-house applications), bolting that software to a hosted collaboration service such as PlaceWare isn't the most elegant solution. Building links from a CRM or ERP application or a database to a collaboration technology is going to be a headache without, for example, controlling upgrades.

That's why Microsoft's purchase falls short of articulating a complete collaboration strategy. It also doesn't address Microsoft's desire to embed collaboration tools using XML (and probably SOAP, UDDI and WSDL) into .Net, which would include capa-

PATRICIA KEEFE

Securing Credibility

THE SLAMMER WORM was aptly named. The critical fallout from the latest in a string of debilitating viruses slammed vendors and users alike, and rightly so. Users took a hit for not heeding endless warnings about the need to keep abreast of security patches, and vendors got smacked for shipping crappy software in the first place. The industry's credibility is on the line, and little wonder.

Slammer, if you've been hibernating, is a self-propagating worm that attacked a known and readily fixable vulnerability in Microsoft SQL 2000 Web servers on Jan. 25, spreading some 250 times faster than Code Red, according to a study released last week by a coalition of security experts.

Ever more advanced malicious programs, and the malcontents and showoffs who construct them, are going to continue to proliferate. That's a given, especially since the number of software vulnerabilities found in 2002 (2,524) rose 82% over 2001, according to security vendor Symantec's biannual "Incident Security Threat Report," which was released last week. Worse is the accelerating pace of new, smarter viruses — 7,000 in the past year [QuickLink 35428].

It should be clear that companies on both sides of the fence need to stop dithering and engage in some constructive action. And it should be obvious by now that IT users must employ preemptive measures and have disaster-response policies in place, ready to go at the first whiff of another viral onslaught.

You'd think that by now the long, sad history of vendnr security missteps would be over. But it's become even more apparent that you can't rely on your software vendors. Despite Microsoft's bravado of a year ago, when it claimed that it was going to "lead the industry to a whole new level of trustworthiness in computing," it hasn't gotten very far. In fact, the company kicked nff the year with several security alerts. It's alerts like these, and the ensuing parade of patches, that are driving users nuts.

Last week's Page One story "Unprepared Firms Slammed" [QuickLink 36044] showed that it's difficult for strapped IT departments to keep up, due to a lack nf time, money or staff. And it doesn't help when the patches come packing their own peck of trouble. Last week, Microsoft had tn pull a security patch for Windows NT 4.0 because it was crashing the operating system it was supposed tn be helping. But don't think that Microsoft is alnne in bedeviling IT in this manner. It isn't.

It seems everyone has something to prove on the security front. We're hearing rumblings of an IT credibility gap, usually pegged to Y2k expenditures, dnt-com blunders and unrealized ROI from huge projects like ERP. You could argue that the security issue casts a longer shadow over IT's effectiveness. It's certainly mnre immediate, and its impact is felt from the boardroom to the desktop.

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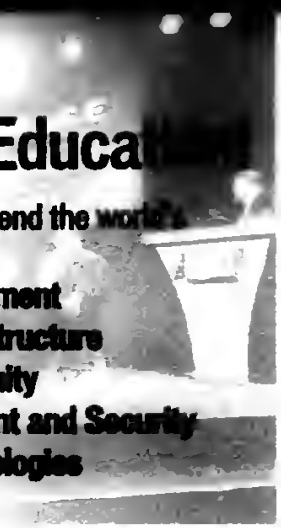

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Group Vice President
IDC Storage Research

FRED VAN DEN BOSCH
EVP & CTO
VERITAS Software

STEVE DUPLESSIE
Founder and Senior Analyst
Enterprise Storage Group

Agenda Snapshot*

For details, updates, and to register visit www.snwusa.com/expo.

*subject to change

Monday, April 14
(Pre-Conference Activity and Tutorial Sessions)

9:30am-11:00am	Primer
12:00pm-5:00pm	Golf Outing
1:00pm-2:00pm	SNIA Tutorial Sessions - choose from five different sessions
2:00pm-2:15pm	Break
2:15pm-3:15pm	SNIA Tutorial Sessions - choose from five different sessions
3:15pm-3:30pm	Break
3:30pm-4:30pm	SNIA Tutorial Sessions - choose from five different sessions
4:30pm-4:45pm	Break
4:45pm-5:45pm	SNIA Tutorial Sessions - choose from five different sessions
7:00pm-9:00pm	Pre Conference Networking Reception

Tuesday, April 15
(General Conference - Day One)

7:30am-8:30am	Continental Breakfast
8:30am-9:15am	Opening Keynote: Regis McKenna
9:15am-12:00pm	General Sessions
12:00pm-1:30pm	Networking Luncheon
1:45pm-5:00pm	General Sessions
4:00pm-5:00pm	Technical, Technical/Business and Business Tracks
5:00pm-8:00pm	Expo, Buffet Dinner, Interoperability and Solutions Demo

Wednesday, April 16
(General Conference - Day Two)

7:30am-8:30am	Continental Breakfast
8:30am-9:15am	Opening Keynote
9:15am-12:00pm	General Sessions
12:00pm-1:30pm	Expo, Buffet Luncheon, Interoperability and Solutions Demo
1:45pm-3:15pm	General Sessions
3:15pm-3:30pm	Break
3:30pm-5:00pm	Technical, Technical/Business and Business Tracks
5:00pm-7:15pm	Expo, Interoperability and Solutions Demo
7:30pm-9:00pm	Gala Evening

Thursday, April 17
(Tutorial and Workshop Sessions)

7:30am-8:30am	Continental Breakfast
8:30am-11:45am	Technical, Technical/Business and Business Tracks
11:45am	Conference Concludes

Registration

Options for IT End-Users*	Earlybird Registration (through March 1st)	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr. 15, 16) (Includes Expo, Meals and Receptions)	$895	$1,095	$1,245
Total 4-day Package (Apr. 14, 15, 16, 17) (Includes General Conference Package, Technical and Business Tracks, SNIA-produced Tutorials, SNIA-Certification "Test-Ready" Courses, Expo, Meals and Receptions)	$1,290	$1,490	$1,690
Options for IT Vendors**			
Total 4-day Package (Apr. 14, 15, 16, 17) (Available to Sponsoring Vendors and their Resellers/Integrators, Industry Consultants, and Storage Solutions Implementors)	$1,290	$1,490	$1,690
Non-Sponsoring/Exhibiting Vendor Package:	$5,000	$5,000	$5,000

* See IT End-Users description on the Registration Application on the reverse. ** See Non-Sponsoring Vendor description on the Registration Application on the reverse.

Submit your nomination today at www.snwusa.com or email Nanette Jurgelewicz at nanette_jurgelewicz@computerworld.com

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Pre-Conference Golf Outing

Complimentary Golf Outing for Registered IT Users

The Pre-Conference Golf Outing at The Palmer Course at Wildfire, located at the JW Marriott Desert Ridge Resort, is complimentary ($165 value) for registered IT End-Users (other participants, including sponsors and vendors, may play on an "as available" basis and are responsible for all applicable golf outing expenses).

For details: contact Chris Leger at **1-508-620-8277**

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CODE: EXPO

Options for IT End-Users*	Earlybird Registration (through March 1st)	Pre-Registration (through April 11th)	On-Site Registration (after April 11th)
General Conference Package (Apr. 15, 16) (Includes Expo, Meals and Receptions)	❑ $895	❑ $1,095	❑ $1,245
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* IT End-Users are defined as those who are attending Storage Networking World with an intent (and an IT spending budget) to potentially buy/purchase hardware/software/services/etc. from our conference sponsors and exhibitors. As such, account representatives/business development from any company, analysts, venture capitalists, and anyone else attending who does not have IT purchasing influence within their organization are excluded from the "IT End-User" designation. Enforcement of this interpretation and policy is at the sole discretion of Computerworld. Questions? Please call 1-800-883-9090.

** Vendors are encouraged to participate at Storage Networking World through sponsorship. (Details are available by calling Ann Harris at 1-508-820-8667.) Alternatively, vendors (as well as venture capitalists, equity analysts, and other "non-IT end-user" professionals as defined by Computerworld), may apply for registration at the "non-sponsoring vendor" rate. Determination of what constitutes a "non-sponsoring vendor" registration is at the sole discretion of Computerworld. You will also be required to adhere to our non-solicitation policy posted on-site.

Registration Information: (This section must be completed in order to process your application)

First Name: _____ Middle Initial: _____ Last Name: _____

Title: _____ Company: _____

Street Address: _____ Suite, Apt., etc.: _____

City: _____ State/Prov: _____ Zip/Postal Code: _____

Country: _____ Phone Number: _____ Extension: _____

Fax Number: _____ E-Mail Address: _____

Badge Name: _____ ❑ Special Services Required? (Please attach written description)

Would you like to receive information about playing in the golf outing on Monday, April 14th (PM)? ❑ Yes ❑ No

Please indicate your preferred conference shirt size: ❑ S ❑ M ❑ L ❑ XL ❑ XXL ❑ XXXL

Attendee Profile: (This section must be completed in order to process your application)

SECTION A - FOR IT END-USERS ONLY

Your Business/Industry:
- ❑ Transportation/Utilities
- ❑ Mining, Oil/Gas
- ❑ Media/Publishing
- ❑ Banking, Finance/Insurance
- ❑ Telecommunications
- ❑ Wholesale/Retail (Non-IT)
- ❑ Advertising, Marketing, Public Relations
- ❑ Education
- ❑ Government/Military
- ❑ Healthcare
- ❑ Manufacturing (Non-IT)
- ❑ Other

Your Job Title/Function:
- ❑ CEO, COO, Chairman, President
- ❑ CIO, CTO
- ❑ VP/GM, Director
- ❑ IS/IT Director, Manager
- ❑ Other IS/IT Department Manager/Supervisor
- ❑ Other Corporate Business Manager
- ❑ Corporate/Business Staff
- ❑ Consultant (External) or Other

Select item below that most closely matches your involvement in IT decisions:
- ❑ Specify features/Technical requirements
- ❑ Evaluate/Recommend Products, Brands, Vendors
- ❑ Create strategy/Determine the need to purchase
- ❑ Set budget for expenditure
- ❑ Authorize/Approve purchase
- ❑ None of the above

Employees in your entire Company:
- ❑ 10,000+
- ❑ 5,000 - 9,999
- ❑ 1,000 - 4,999
- ❑ 500 - 999
- ❑ 100 - 499
- ❑ Less than 100

Estimated annual revenue of your entire company:
- ❑ $10 Billion+
- ❑ $5 Billion - $9.9 Billion
- ❑ $1 Billion - $4.9 Billion
- ❑ $500 Million - $999 Million
- ❑ $100 Million - $499 Million
- ❑ $50 Million - $99 Million
- ❑ Less than $50 Million

Annual company IT budget (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Annual company IT budget (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (All IT products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

Your personal IT spending authority (Storage products and services):
- ❑ $100 Million+
- ❑ $50 Million - $99.9 Million
- ❑ $20 Million - $49.9 Million
- ❑ $10 Million - $19.9 Million
- ❑ $5 Million - $9.9 Million
- ❑ $1 Million - $4.9 Million
- ❑ $500,000 - $999,999
- ❑ Less than $500,000

SECTION B - FOR IT VENDORS ONLY

Your Business/Industry:
- ❑ VAR/VAD/ASP/System Integrator
- ❑ Industry Consultant/Storage Solution Integrator
- ❑ Manufacturing (IT)
- ❑ Computer Retailer/Dealer/Wholesaler
- ❑ Software Development (Storage)
- ❑ Other Computer Related (Non-Storage)

Your Job Title/Function:
- ❑ CEO, COO, Chairman, President
- ❑ CFO/Controller/Treasurer
- ❑ VP/GM, Director
- ❑ Sales, Marketing, Product Staff
- ❑ CIO, CTO, Other IS/IT Manager
- ❑ Engineering Staff
- ❑ Press

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Cancellation Policy (*All of the below options require written notification.*)
In the event of cancellation, the registrant has three options:
1) He or she may substitute another attendee for this conference.
2) He or she may transfer this registration to the Fall 2003 Storage Networking World® conference, if written notice is received by March 31, 2003.
3) The registration fee will be refunded, less $250 service charge, if written notice is received by March 31, 2003.

Computerworld reserves the right to limit and/or refuse any registration for any reason.

Schedule of Conference Events (subject to change)

Monday, April 14, 2003
- Pre-Conference Golf Outing
- Pre-Conference Networking Reception
- Tutorial Sessions

Tuesday, April 15, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition

Wednesday, April 16, 2003
- General Conference
- Interoperability and Solutions Demo
- Exposition
- Gala Evening

Thursday, April 17, 2003
- Tutorial Sessions

bilities such as Passport. Furthermore, the company has yet to release an instant messaging package as part of Windows Server (that's slated for the third quarter), key to an integrated collaboration system.

According to Mike Gotta, an analyst at Meta Group, there also are some architecture challenges to the PlaceWare deal. Microsoft will have to port PlaceWare to the Windows Server operating system (it's now based on the Java/Sun platform and isn't .Net-certified). All this has to happen before integration into portals, project management applications, the Office suite, Windows Messenger and Exchange can take place. Plus, the purchase doesn't clarify plans for the Real Time Communications component of Windows Server due later this year.

Gotta hopes Microsoft will spell out how on-premise conferencing and collaboration within Windows and with real Web services components will take place.

Until then, enterprise customers will be kept waiting. Or go to IBM. ◗

DAVID FOOTE

IT Job Trends Yield Surprises

IN HIS FIRST State of the Union speech, President Bush challenged Americans to consider some form of government service during their lifetimes. I don't necessarily think he had public-sector IT jobs in mind, but private-sector IT workers are more aggressively seeking jobs in federal and state government, according to my firm's latest quarterly research, which is compiled from continual tracking of nearly 32,000 IT professionals, 36% of whom work in organizations with $500 million or more in revenue or $3 billion-plus in total assets.

Can you blame disaffected, stressed-out workers with worthless stock options for suddenly wanting the more relaxed work environment, better job security, fully paid family-friendly benefits and shorter hours of the public sector? Especially those who risk losing their jobs permanently to offshore technicians, contractors and part-time workers who can work more cheaply and provide IT executives greater flexibility in responding to shifting business needs.

So-called permanent layoffs are a serious employment trend, appearing not just in our research but also in a report issued in August by the Bureau of Labor Statistics that confirmed the beginnings of structural downsizing more than a decade ago. If that's not ample reason for IT workers to be concerned, consider the thousands of manufacturing and aerospace jobs that vanished to foreign lands in the last century.

As for IT compensation, 2002 was a tough year, but it had its bright spots. Overall, base salaries for 85 IT positions surveyed in our research declined by an average of 2.8%, and cash bonuses paid out fell by 32%.

Bucking the downward trend, salaries for corporate security positions increased by an average of 5.5% in 2002, with total compensation up 3.3% as bonuses declined by a less dramatic 9.1%. Moreover, premium pay for security certification bonuses has risen 11.3% in value in 2002 and an even more impressive 31% over the past two years, thanks to several technical niche certifications from the SANS Institute and renewed interest in the management-oriented Certified Information Systems Security Professional and Certified Information Systems Auditor certifications: All registered between 11% and 38% growth last year.

Certifications are more popular, partly for validating training expenses and pay adjustments with today's cost-conscious executives. Median premium pay for 54 technical certifications has grown a surprising 0.5% over the past two dreadful years (even with a modest 3.3% decline in 2002), led not just by security but also by solid performances last year by certifications in project management, Linux (up 17%), and networking (most notably Novell's Certified Novell Engineer and Master Certified Novell Engineer).

Also hot: Voice over IP, Wireless Markup Language (WML), DB2, VoiceXML and SAP's Advanced Business Application Programming language skills all grew in value in 2002. Highest paying? Rapid application development/extreme programming, XML, SQL Server, WML and Oracle database skills.

Hot job segments for 2003, according to our research, are security, network management, enterprise infrastructure and architecture, database, SAP-related development, project management, and project-based work implementing customer-facing systems and processes.

Want to know what accounts most for IT workers' current predicaments? Career choices they made long before the recession. Those choosing technology specializations got lucky if they picked the right vendor or niche technology. While missing out on the many benefits specialists enjoyed in the boom times, those who took the generalist path have generally adapted better to today's conditions and have the most employment opportunities. ◗

WANT OUR OPINION?

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READERS' LETTERS

Offshore Threats

THE OFFSHORE outsourcing industry for programming and development continues to grow [QuickLinks 35886 and 36001], and the latest phase is the most dangerous of all. People in IT management today got their start as programmers, database analysts or perhaps even at the lowly help desk, but now those jobs are being sent overseas. While this may appear sound in the short term, the long-term repercussions of this brain drain will manifest themselves in an evaporation of our competitive advantages.

I am all for the H-1B program, which brings skilled, educated people to our shores. But I fear we are giving away too much of our future by sending skilled jobs overseas.

Terry Shea
Director of IS, The Sporting News, St. Louis, tshea@sportingnews.com

DAVID FOOTE'S prediction fails to take into account the new emphasis on IT and software security due to concerns regarding terrorism and cyber-based attacks. Using companies external to the U.S. limits your ability to screen who will work on code. Any application on a network has the potential for trapdoors, Trojan horses or remote software agents. If you keep your developers in-house, then you have control of who works on what.

Thom Campbell
Senior developer, St. Petersburg, Fla.

Defects, Not Bugs

I READ ONCE that saying software has bugs is a way for the software developer to distance himself from responsibility ["Biting Back," QuickLink 35204]. The word *bug* implies that it crawled into the program somehow; it almost sounds cute. Use the term *defect* and see how much harder it is to trivialize it. It implies much more strongly that something needs to be fixed.

Lars Sundstrom
Development manager, Melbourne, Australia

Remote and Secure

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Ravila Helen White
CISSP, Seattle

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Russell Ruggiero
IT research analyst, West Windsor, N.J.

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bilities such as Passport. Furthermore, the company has yet to release an instant messaging package as part of Windows Server (that's slated for the third quarter), key to an integrated collaboration system.

According to Mike Gotta, an analyst at Meta Group, there also are some architecture challenges to the PlaceWare deal. Microsoft will have to port PlaceWare to the Windows Server operating system (it's now based on the Java/Sun platform and isn't .Net-certified). All this has to happen before integration into portals, project management applications, the Office suite, Windows Messenger and Exchange can take place. Plus, the purchase doesn't clarify plans for the Real Time Communications component of Windows Server due later this year.

Gotta bopes Microsoft will spell out how on-premise conferencing and collaboration within Windows and with real Web services components will take place.

Until then, enterprise customers will be kept waiting. Or go to IBM. ◗

DAVID FOOTE

IT Job Trends Yield Surprises

IN HIS FIRST State of the Union speech, President Bush challenged Americans to consider some form of government service during their lifetimes. I don't necessarily think he had public-sector IT jobs in mind, but private-sector IT workers are more aggressively seeking jobs in federal and state government, according to my firm's latest quarterly research, which is compiled from continual tracking of nearly 32,000 IT professionals, 36% of whom work in organizations with $500 million or more in revenue or $3 billion-plus in total assets.

Can you blame disaffected, stressed-out workers with worthless stock options for suddenly wanting the more relaxed work environment, better job security, fully paid family-friendly benefits and shorter hours of the public sector? Especially those who risk losing their jobs permanently to offshore technicians, contractors and part-time workers who can work more cheaply and provide IT executives greater flexibility in responding to shifting business needs.

So-called permanent layoffs are a serious employment trend, appearing not just in our research but also in a report issued in August by the Bureau of Labor Statistics that confirmed the beginnings of structural downsizing more than a decade ago. If that's not ample reason for IT workers to be concerned, consider the thousands of manufacturing and aerospace jobs that vanished to foreign lands in the last century.

As for IT compensation, 2002 was a tough year, but it had its bright spots. Overall, base salaries for 85 IT positions surveyed in our research declined by an average of 2.8%, and cash bonuses paid out fell by 32%.

Bucking the downward trend, salaries for corporate security positions increased by an average of 5.5% in 2002, with total compensation up 3.3% as bonuses declined by a less dramatic 9.1%. Moreover, premium pay for security certification bonuses has risen 11.3% in value in 2002 and an even more impressive 31% over the past two years, thanks to several technical niche certifications from the SANS Institute and renewed interest in the management-oriented Certified Information Systems Security Professional and Certified Information Systems Auditor certifications: All registered between 11% and 38% growth last year.

Certifications are more popular, partly for validating training expenses and pay adjustments with today's cost-conscious executives. Median premium pay for 54 technical certifications has grown a surprising 0.5% over the past two dreadful years (even with a modest 3.3% decline in 2002), led not just by security but also by solid performances last year by certifications in project management, Linux (up 17%), and networking (most notably Novell's Certified Novell Engineer and Master Certified Novell Engineer).

Also hot: Voice over IP, Wireless Markup Language (WML), DB2, VoiceXML and SAP's Advanced Business Application Programming language skills all grew in value in 2002. Highest paying? Rapid application development/extreme programming, XML, SQL Server, WML and Oracle database skills.

Hot job segments for 2003, according to our research, are security, network management, enterprise infrastructure and architecture, database, SAP-related development, project management, and project-based work implementing customer-facing systems and processes.

Want to know what accounts most for IT workers' current predicaments? Career choices they made long before the recession. Those choosing technology specializations got lucky if they picked the right vendor or niche technology. While missing out on the many benefits specialists enjoyed in the boom times, those who took the generalist path have generally adapted better to today's conditions and have the most employment opportunities. ◗

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READERS' LETTERS

Offshore Threats

THE OFFSHORE outsourcing industry for programming and development continues to grow [QuickLinks 35866 and 36001], and the latest phase is the most dangerous of all. People in IT management today got their start as programmers, database analysts or perhaps even at the lowly help desk, but now those jobs are being sent overseas. While this may appear sound in the short term, the long-term repercussions of this brain drain will manifest themselves in an evaporation of our competitive advantages.

I am all for the H-1B program, which brings skilled, educated people to our shores. But I fear we are giving away too much of our future by sending skilled jobs overseas.

Terry Shea
Director of IS, The Sporting News, St. Louis, tshea@sportingnews.com

DAVID FOOTE'S prediction fails to take into account the new emphasis on IT and software security due to concerns regarding terrorism and cyber-based attacks. Using companies external to the U.S. limits your ability to screen who will work on code. Any application on a network has the potential for trapdoors, Trojan horses or remote software agents. If you keep your developers in-house, then *you* have control of who works on what.

Thom Campbell
Senior developer, St. Petersburg, Fla.

Defects, Not Bugs

I READ ONCE that saying software has bugs is a way for the software developer to distance himself from responsibility ["Biting Back," QuickLink 35204]. The word *bug* implies that it crawled into the program somehow, it almost sounds cute. Use the term *defect* and see how much harder it is to trivialize it. It implies much more strongly that something needs to be fixed.

Lars Sundstrom
Development manager, Melbourne, Australia

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Q&A

IT for the Autobahn

Claus Hohmann, CTO at Volkswagen's Autostadt, an automotive theme park where customers can pick up vehicles they custom-ordered online, talks about the Autostadt's IT infrastructure and the challenges of keeping the complex running. **Page 28**

SECURITY MANAGER'S JOURNAL

FTP Server Offers Key to the Store

Incidents involving compromised servers at Mathias Thurman's company show why it's important to have security guidelines for both external- and internal-facing servers. **Page 34**

OPINION

Getting Out the Crystal Ball

The future of IT includes a revival of interest in the network computer and Java, says columnist Nicholas Petreley. **Page 38**

BRAD VEO

Balancing The IT Portfolio

IT portfolio management tools apply metrics that help analyze and prioritize IT projects, but the products are still evolving. **By Thomas Hoffman**

As IT managers struggle to do more with less, the notion of managing an organization's IT assets like a financial portfolio — using a Buy, Hold and Sell approach — has caught fire over the past 18 months. "We want to look at our IT expenditures more from a strategic business-value basis than from a technical cost basis," says Carl Ascenzo, senior vice president and CIO at Blue Cross and Blue Shield of Massachusetts Inc. in Boston.

Many new IT portfolio management tools have emerged. Although a handful of these packages are sophisticated enough for IT managers to analyze all of the IT investment opportunities within an organization, many lack maturity and features, acting as little more than project management packages on steroids.

"Some tools just aren't very broad or very deep," says Marnie Ross, a Meta Group Inc. analyst in Vancouver, British Columbia.

Ross and other analysts typically break the IT portfolio management tools market into three categories: project management tools, which provide rudimentary portfolio analysis capabilities; complex tools that are adept at calculating what-if scenarios for IT investments; and enterprise software tools from vendors such as PeopleSoft Inc. and Oracle Corp. that are starting to make a foray into the market.

Project management portfolio packages, such as the one from ProSight Inc. in Portland, Ore., primarily focus on managing individual projects or a panoply of projects from start to finish. Although most of these packages integrate well with Microsoft Project, they typically provide limited portfolio management and analysis capabilities. "There is a tendency [among vendors] to either bundle or provide supplemental services with these packages," says Ascenzo.

More sophisticated analytical tools are offered by vendors such as New York-based United Management Technologies Corp. (UMT) and Ann Arbor, Mich.-based Program Planning Professionals Inc., also known as Pcubed. UMT and Pcubed each combine services and software aimed at "figuring out what your processes are and managing your portfolio" by providing actionable measurements of variables such as cost, risk and resources to help IT organizations maximize their IT investments, says Margo Visitacion, a Giga Information Group Inc. analyst based in Norwalk, Conn.

While the niche vendors focus on project management and IT portfolio management capabilities, enterprise software vendors such as PeopleSoft, Oracle and

Analyzing the Tools

Meta Group analyst Mardo Ross offers the following assessment of IT portfolio management tools:

	Pacific Edge Software Inc. Bellevue, Wash. www.pacificedge.com	ProSight Inc. Portland, Ore. www.prosight.com	Business Engine Corp. San Francisco www.businessengine.com	UMT Technologies Corp. New York www.umt.com
PRODUCT	The Edge for IT	ProSight Portfolios	Business Engine Network	ShelFrames Software Suite
PROS	Strong in cost estimating, portfolio analysis, scenario planning and resource allocation. Good reporting capabilities with Microsoft Project. Includes its own project and resource management tools.	Interoperates with other products such as Business Engine and its professional services automation capabilities.	Strongest in professional services automation. Relies heavily on Microsoft Project for project management functions. Offers good support for the IT budgeting process across multiple currencies.	Strong in IT portfolio analysis and program management areas. UMT is moving into portfolio management. ShelFrames can identify internal processes.
CONS	Weak in terms of mapping internal workflow processes with the software. But the product allows an organization to modify its work processes as they mature with its internal IT portfolio management methodologies.	ProSight is more of a portfolio analysis tool than a portfolio management tool. "There's no magic to that," says Ross.	Could do a better job with opportunity management, particularly in the area of time and resource management.	Lacks asset management capabilities.

Computer Associates International Inc. are beginning to make inroads in the IT portfolio management space.

PeopleSoft introduced Project Portfolio management capabilities under its Enterprise Services Automation package in December. It lets customers evaluate the performance of a project against corporate objectives, says Chris Leone, a vice president of product strategy at the Pleasanton, Calif.-based company. PeopleSoft's IT portfolio management system is more advanced than those of Oracle and CA. And Visitacion expects future releases of PeopleSoft's offering to be more sophisticated than Pacific Edge Software Inc.'s package but not quite as robust as UMT's tools in terms of features.

"The challenge with these tools is drawing a line between project management and portfolio management," says Ian Campbell, president of Nucleus Research Inc. in Wellesley, Mass. At the very least, some of the less sophisticated tools bring structure to the IT portfolio management process, says Campbell. But they're "just a step above project management tools and lack the ability to do what-if scenarios," he says.

Most IT portfolio management tools are priced on a per-seat basis, with a typical license starting at $50,000 and running to several hundred thousand dollars, depending on the number of users, the configuration and the amount of customization required. UMT prices its software based on the number of business departments being supported, typically starting at $75,000, says President Mike Gruia. PeopleSoft offers a "value-based" pricing model that's based in part on the customer company's revenue level, says Leone.

Getting Started

For companies just beginning to build an IT portfolio management program and create a methodology for tracking and analyzing their technology investments, vendors such as Pacific Edge in Bellevue, Wash., and Business Engine Corp. in San Francisco are good starting points in terms of portfolio analysis and professional services automation capabilities, say analysts.

Pacific Edge's product — The Edge for IT — consolidates projects that are tracked using Microsoft Project, "and that's where the strength is," says Scott Marean, assistant vice president of program management services at First Penn-Pacific Life Insurance Co. in Schaumburg, Ill.

UMT's software uses a set of algorithms that help IT managers optimize their resources. So if an IT organization has $300 million worth of potential projects to pursue and only $50 million to work with, the user can input the organization's business objectives into the software, which helps prioritize them by applying algorithms to determine which investments will yield the greatest returns.

The software also finds mismatches in IT staffing resources — such as having too many legacy system programmers — to help optimize supply and demand between staff and projects, says Mike Gruia, president of UMT.

Like UMT, ProSight also makes use of algorithms to run scoring models based on financial calculations such as economic value added and net present value, says John Cimral, the company's CEO. ProSight's scoring models factor in, among other things, the number of users, the performance characteristics of a system and the hardware and software standardization issues, he adds.

Limitations and Advances

One of the shortcomings of most IT portfolio management tools is their inability to "focus on the life cycle of an asset," determine the financial value of a software package or piece of hardware and indicate whether or when it makes sense to retire that technology, according to Meta Group's Ross. At least one vendor, PeopleSoft, is discussing the kinds of asset management capabilities sought by its customers for a future release, says Leone.

Some IT portfolio management vendors are also working on creating "executive dashboard" modules that let CEOs, chief financial officers and other senior managers view the results of their IT spending decisions in real time and evaluate their IT investment options. UMT expects to have a fully integrated dashboard available to customers by midyear, says Gruia.

Pcubed currently offers a portfolio dashboard that uses decision-tree structures and business intelligence to provide business analytics around an organization's portfolio information, says CEO Adrian Balfour.

Vendors still need to fill gaps in their IT portfolio management products. For example, many systems lack the ability to assess risks — a critical component in evaluating IT investments. "I don't think any of the tools do a great job of leading users to evaluate and measure risk," says Ross.

THE OUTSOURCING OPTION

Blue Cross and Blue Shield of Massachusetts went with a third-party service to help assess IT investments:
QuickLink 35740

Profiting From Portfolio Management: An implementation at First Penn-Pacific Insurance Co. increased staff productivity 10%:
QuickLink 35735
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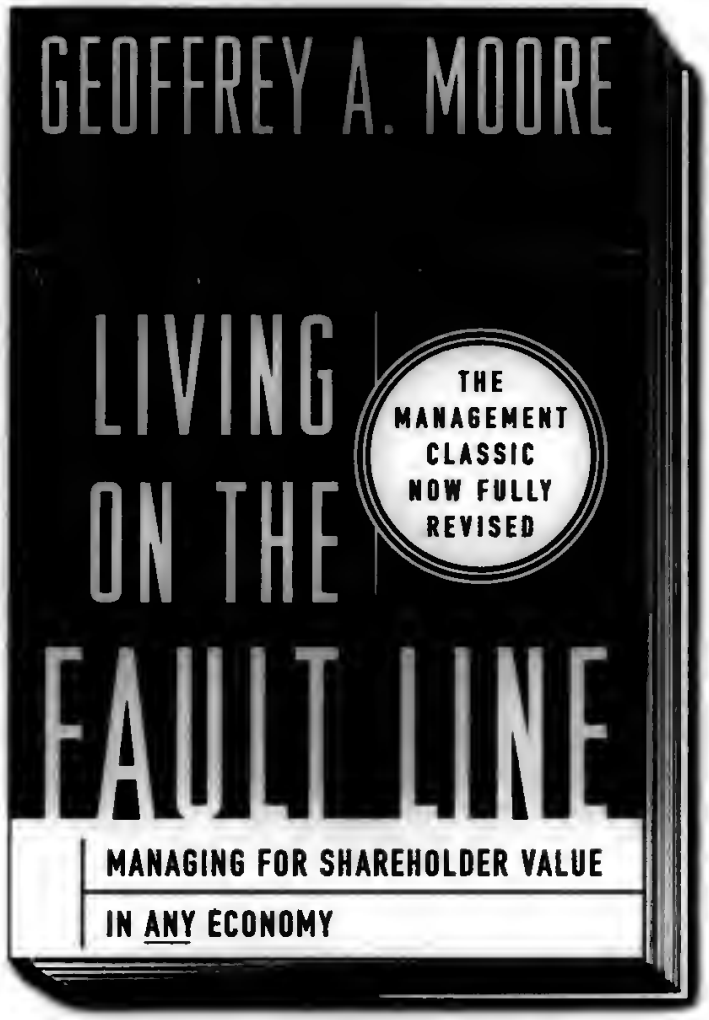
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IT for the Autobahn

Autostadt GmbH is Volkswagen AG's information and entertainment park in Wolfsburg, Germany, which opened in 2000. It includes an automotive museum, an entertainment complex and a place for customers to pick up automobiles custom-ordered online. As chief technology officer, **CLAUS HOHMANN** *is responsible for the research and development of new technologies. Hohmann spoke with Computerworld's Linda Rosencrance about the Autostadt's IT infrastructure and the unique challenges of running the facility.*

What IT challenges did you face in bringing Autostadt online? The IS/IT department was established 11 months before Autostadt opened. We came on board on this project as the last team, [but] we finished a complete IT infrastructure and all the basic systems for car delivery.

Because we are unique, we have to develop our own systems. That means we combine legacy systems of the Volkswagen Group worldwide because we are delivering here Volkswagen products that are produced all over the world.

The main challenge was to provide for a system which integrated both worlds: The VW systems, which are used to move up to 5 million cars per year, communicate with the Autostadt so that the entire delivery process functions with 99.99% reliability. The Autostadt is open 364 days per year, and the systems must be available for a minimum of 12 hours per day.

What core systems did you choose? The Sales and Disposition of New Cars and the New Car Transport systems are based on IBM System/390, DB2 database and ... Cobol. The online interfaces use the IBM transaction monitor MQSeries and BEA transaction monitor Tuxedo.

Due to the location and system complexity, maintenance can only be carried out during night hours. Furthermore, there is also the need to guarantee 100% data transactioo reliability and accessibility. This level of guarantee is provided through the Tuxedo system.

What other unique business needs do you have to meet? Our IT infrastructure allows us to deliver daily, seven days a week, 600 cars a day to our customers. Every delivery is an eveot-oriented activity, and we run special events throughout the Autostadt. These attractions are all digitized.

What do you mean by "digitized"? The exhibits and attractions in the Autostadt have a show control and run fully automated. Our major project in this field was the development of a totally new ... online monitoring system, using Crestroo [Electronics Inc.] technology, where it is possible for us to check the status of each exhibit every second ... right down to what film is running and which light bulb is on, off or defective.

"Our IT infrastructure allows us to deliver daily, seven days a week, 600 cars a day to our customers.

CLAUS HOHMANN, CTO, VOLKSWAGEN AUTOSTADT

What innovative IT projects are in the works? We are running via wireless LAN all our outdoor areas and ... our delivery center. Our staff outdoors in the theme park, as well as in the car delivery process and in the guest processes, use handhelds with wireless LANs. And we are implementing a Bluetooth system for our tour guides ... to support them with little handbeld devices that will give them the data and other facts they have to build into their stories.

This project with Pocket PCs and Bluetooth is the start of providing our employees with information about the exhibits and displays while mobile and oo the job. Integrated into the system is a basic localization process [via infrared] so that it is possible to both go straight to the information based oo the exhibit that they are standing next to and navigate to the information for other exhibits. Vignette has been used as a basis to provide the front end and database connectivity for the system.

What other infrastructure projects are planned? We want to utilize the full scheme of voice over IP in our customer care center with 40 [workstations]. VOIP integrates all communicatioo mediums within the Autostadt — voice, e-mail, fax and voice recorder, [which is] located on the PC. In the HiPath Contact Center from Siemens, [which allows] classic PBX connections and voice over IP, all of these inputs are brought together to improve the performance of the call center agents.

[We are also working on] a new Autostadt Internet approach, based on a content management system [from] Vignette. We use Vignette not only for the pure HTML pages, but also for flash pages and WAP [Wireless Application Protocol]. The WAP presentation of Autostadt will be changed to a UMTS [Universal Mobile Telecommunications System] presentation in the coming months.

Our content team writes the articles, inclusive of pictures, film content, etc., directly in the editorial system, which is also Vignette-based. After release by the chief editor, the articles are launched automatically to our Internet presence. The Autostadt provides an InfoSite, where current standards of HTML are supported, and a Autosphere site, where leading-edge and future possibilities of the Autostadt presence shall be shown. This future virtual world is also based oo Vignette.

You haven't mentioned that device sitting next to you [see photo]. Where does that fit? The POIs [point of information terminals] are a live interface between visitors and the Autostadt. Here, visitors gain access to various topics of information, both written and visual in nature. The challenge was to design a GUI that was understandable by many different nationalities. The POI needed therefore to be an interactive multimedia terminal. The computer is an industrial PC with a touch screen running on Linux with a special Web browser from Munich-based Jentro AG. We use Vignette for generating the POI Internet site. The special presentatioo for the POI is sent from the same servers as the normal Internet presentation.

The special feature of the POI is its kinetics. The display body rotates horizontally and moves vertically if no user stands next to the POI. This is a form of self-marketing. If the user comes, the display body is adjusted horizontally and vertically by an ultrasound sensor. We have 30 indoor and nine outdoor POIs. The glass POI was developed to show the visitor just how complex this system is.

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Data Scrubbing

MELINDA BECK

DEFINITION

Data scrubbing is the process of fixing or eliminating individual pieces of data that are incorrect, incomplete or duplicated before the data is passed to a data warehouse or another application.

BY TOMMY PETERSON

THE NEED TO SCRUB DATA is made pretty clear by simple questions like this one: Are Jerry L. Jonson of 16 Clarke St., Altuna, PA, and Gerry L. Johnson of 16 Clark Street, Altoona, Penn., the same person? You would probably say that most likely they are. But a computer, without help from specialized software, would deal with the information as though it were about two different guys.

The human eye and mind recognize that the differences between the two sets of data records are probably the result of mistakes or inconsistencies in data entry. Weeding out and fixing or discarding inconsistent, incorrect or incomplete data is what's called data scrubbing or cleansing.

"Dirty data" has been a problem for as long as there have been computers — or maybe for as long as people have attempted to gather and analyze information. It's a large part of the "garbage in" that can result in the worthless "garbage out" of a computing process.

The issue of data hygiene has become increasingly important as more and more corporations implement complex customer relationship management (CRM) systems and build data warehouses that merge information from many different sources.

Without data cleansing, the IT staffs of those companies face the unappetizing prospect of merging corrupt or incomplete bits of data from multiple databases. A single piece of dirty data might seem like a trivial problem, but if you multiply that "trivial" problem by thousands or millions of pieces of erroneous, duplicated or inconsistent data, it becomes a prescription for chaos.

Sources of Dirty Data

In its 2001 report about organizations implementing data warehouses for the purpose of business intelligence, Cutter Consortium identified the following causes of dirty data:

- Poor data entry, which includes misspellings, typos and transpositions, and variations in spelling or naming.
- Data missing from database fields.
- Lack of companywide or industrywide data coding standards (a big problem in health care, for example).
- Multiple databases scattered throughout different departments or organizations, with the data in each structured according to the idiosyncratic rules of that particular database.
- Older systems that contain poorly documented or obsolete data.

As the list suggests, data scrubbing is aimed at more than eliminating errors and redundancy. The goal is also to bring consistency to various data sets that may have been created with different, incompatible business rules. Without data scrubbing, those sets of data aren't very useful when they're merged into a warehouse that's supposed to feed business intelligence across an organization.

In the early days of computing, most data scrubbing was done by hand. And when performed by bleary-eyed humans, the laborious task of finding and then fixing or eliminating incorrect, incomplete or duplicated records was costly — and it often led to the introduction of new errors.

Now, specialized software tools use sophisticated algorithms to parse, standardize, correct, match and consolidate data. Their functions range from simple cleansing and enhancement of single sets of data to matching, correcting and consolidating database entries from different databases and file systems.

Most of these tools are able to reference comprehensive data sets and use them to correct and enhance data. For example, customer data for a CRM application could be referenced and matched to additional customer information, such as household income and other demographic information.

Many Options

Companies that want to use specialized data cleansing tools can get them from several sources. Building the tools in-house was the most common choice among companies studied by Arlington, Mass.-based Cutter Consortium; of the surveyed companies that said they were using such tools, 31% said they were building them in-house (see box).

But companies that choose to buy data cleansing software have plenty of options. Oracle Corp., Ascential Software Corp. in Westboro, Mass., and Group 1 Software Inc. in Lanham, Md., led other vendors in the Cutter survey, with 8% of the market each. Other vendors, including PeopleSoft Inc. in Pleasanton, Calif., SAS Institute Inc. in Cary, N.C., and Informatica Corp. in Redwood City, Calif., were bunched a few percentage points behind. The major data warehouse and business-intelligence vendors also include data scrubbing functionality in their products.

Vendors such as Acxiom Corp. in Little Rock, Ark., and Sagent Technology Inc. in Mountain View, Calif., offer online data cleansing and enhancement services. These services provide data cleansing as well as supplemental information on a record-by-record basis in near real time over the Internet.

Although data hygiene is essential to getting useful results from any application, it shouldn't be confused with data quality, according to business-intelligence analysts. But data quality doesn't really refer to whether data is clean or dirty — it's a matter of whether the data is good (valid) or bad (invalid). Validity is a measure of relevance of the data to the process or analysis at hand. The measure of that validity changes with the context in which the data is used.

Ideally, data that has been scrubbed is error-free and consistent, and some data cleaning software even checks for the usefulness of the data it's processing. Data scrubbing is an essential chore for any IT operation, but it's only a starting point.

BY THE NUMBERS

Data Cleansing

- Data cleansing accounts for up to 70% of the cost and effort of implementing most data warehouse projects, according to analysts.
- In 2001, The Data Warehousing Institute estimated that dirty data costs U.S. businesses $600 billion per year.
- Data cleanliness and quality was the No. 2 problem – right behind budget cuts – cited in a 2002 IDC survey of 1,848 companies implementing business analytics software enterprisewide.
- Just 23% of 120 companies surveyed by Cutter Consortium on their data warehousing and business-intelligence practices use specialized data cleansing tools.
- Of those companies in the Cutter Consortium study using specialized data scrubbing software, 31% are using tools that were built in-house.

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Intel Looks to Software

Parallel-processing prognostications. By Gary H. Anthes

COMPUTER HARDWARE GIANT Intel Corp. is also one of the largest software developers in the world, employing more than 6,000 software professionals. In December, the company formed a new position — that of Intel senior fellow — at the top of its research hierarchy and appointed four people to the role, including **Justin R. Rattner**, director of microprocessor research, and **Richard Wirt**, general manager of software and solutions.

Recently, Rattner and Wirt told *Computerworld* what's coming in the software realm.

What's new in compilers?

WIRT: We see activity in traditional compilers that adapt programming languages better for multithreading and hyperthreading. OpenMP, an initiative to adapt programming languages to handle threading, is a good example. [See glossary at right.]

RATTNER: Today's instruction sets were really designed for static compilers, so the trade-offs they make are in favor of static compilers. When we move to dynamic compilers [like Java and .Net], we can continue to optimize even while the program is executing. The optimizing compiler is querying the hardware on a periodic basis and saying, "How's the program running?"

But such performance monitors aren't new.

RATTNER: Today, performance monitors are really designed for debugging, and they are inaccessible to the compiler. What we are definitely looking at in the future is program-visible instrumentation so the compiler has access to [runtime conditions]. This is on the fly; this is the compiler in the loop. This is where our heads are at.

Will we see more parallel processing of various types?

WIRT: We went through getting computers to parallelize the instructions on a single [processor]. Intel pushed that to get about as much as we can get, so now we are beginning to go threaded on single [processors]. Then you'll see us take multiple [threaded processors] and put them on a motherboard.

FUTURE WATCH

As we add more transistors, then, instead of multiple [processors] on the motherboard, we'll put them on the die, on the chip itself. We refer to that as dual-core. Then you want to string these things together in big clusters. Each node gets more powerful as driven by Moore's Law, but we will string more and more of these together to form a supercomputer.

How will you get more parallelism out of existing applications?

RATTNER: We've discovered you can create "helper threads" when certain situations arise. A set of helper threads created by the compiler can run ahead of the main thread in order to bring normally missing data into the cache ahead of the time the main thread will need it.

We now have an experimental version of our production compiler that will automatically generate helper threads.

How much help will the helper threads be?

RATTNER: We are finding all kinds of clever ways to use them. We've seen two- to four-times improvements on some applications. On average, we'd expect to see 1.3 to 1.6, and some programs will do amazingly well.

Over the years, many of the promises of parallel processing have been dashed because the software is so difficult to develop.

WIRT: The problem was, people expected the compiler to do it for them, and there was a lot of research there. Then they came to the conclusion that you still needed programmers' help, and that's why they invented OpenMP with those "pragmas," or hints that the programmer puts in the application so the compiler could parallelize [the code].

So as you go across nodes, with MPI [the Message Passing Interface protocol], you break the code into functional blocks, one function on one node. The programmer does that. But now it's at a higher level of abstraction that the programmer can understand.

That's geared for scientific computing. How about commercial applications?

WIRT: The same thing's going on — breaking up the application into functions and having them talk to each other. Web services is a good example. Think of SOAP doing for the business world what MPI does for the technical world — having objects talk to each other in order to give you scalability across a cluster or distributed network.

Where is this headed, and what's needed to get there?

WIRT: Typically, there are tens of objects working together in a business app, but in the technical world, people are building clusters with 10,000 nodes. What's needed are debugging and performance-tuning tools, and tools that allow you to look at all those nodes that are cooperating.

Parallel-Processing Parlance

1. **OpenMP (multiprocessing).** A specification for a set of compiler directives and library routines that can be used to specify shared-memory parallelism in Fortran and C/C++ programs.

2. **Message Passing Interface (MPI).** A standard that facilitates the development of parallel applications. It defines the syntax and semantics for library routines for portable message-passing programs in Fortran or C/C++.

3. **Hyperthreading.** Intel's way to make a single physical processor appear to the operating system or multithreaded user program as two logical processors.

4. **Pragma.** A way for the programmer to tell the compiler to do something "pragmatic" at the point in the program where the pragma appears. It might say to use a certain library or generate a certain kind of code for parallel processing.

5. **Helper threads.** Small strings of instructions that help the main application thread perform better. Generated by the compiler, they run ahead of the main thread and can, for example, bring data into the cache in advance so it's available when needed.

FTP Server Offers Key to the Store

Sloppy practices leave critical user IDs and passwords available for public download.

By Mathias Thurman

THIS WEEK I was sidetracked from my projects yet again by the need to investigate two security incidents. Both involved deleted files on servers that apparently had been compromised.

The first incident was more of a server configuration issue than a traditional security incident, but it still warranted my attention. It started when a customer sent a message addressed to our abuse e-mail alias saying that he noticed several suspicious files on our public file transfer protocol (FTP) server. So I logged into the server as an anonymous user, and sure enough, several directories had been created and populated with 4GB of unauthorized MP3 music files.

SECURITY MANAGER'S JOURNAL

Even more alarming, I found a file named Commands that contained account names and associated passwords for support Web sites we use and for accessing internal servers in my company.

The special accounts that give us access to technical support Web sites require user IDs and passwords for access. We pay tens of thousands of dollars per year for some of those accounts. It turns out that our product support group put the file there as a repository for what it considered shared, nonsensitive information. Later, it apparently became a repository for all sorts of information.

Unfortunately, we can't just make the anonymous FTP server go away. It's a valuable customer service, and our technical support team uses it extensively to offer patches and other support programs to our users. Our customers also use it to upload event logs and dump files for review by our technical support team. There are other methods for offering this type of service, but the anonymous FTP server has been the most effective and has been accepted by our staff and customers. So it's here to stay. But if it isn't configured properly, an anonymous FTP server can be easily abused and become a catalyst for legal, performance and security issues.

The MP3 files are one such legal issue, since they probably violate copyright laws and an investigation could embarrass our company. Performance would also suffer if the FTP server was saturated with such files, or if too many users accessed the system simultaneously to try to download the files. And we don't want third parties logging into our servers or support services.

Our FTP server had been configured to let anonymous users create their own directories, with no limits on the size of uploaded files. Simple upload quotas and directory permissions would have prevented this incident from happening. I'm going to add guidelines for configuring the anonymous FTP server to our already published secure baseline procedures.

> **I found a file named Commands that contained account names and associated passwords for support Web sites we use and for accessing internal servers.**

Certifiably Hackable

The second incident involved malicious activity against a server in our certification lab. A systems engineer noticed that one of his source-code repository servers wasn't responding when he tried to access it using the Secure Shell program. To gain administrative access to the server, he had to use the server console. Then he noticed that several key directories had been deleted, which accounted for his initial inability to access the server. He then started poking around at the log files.

I'm sure that this engineer wanted to determine the extent of damage and identify the individual responsible. But there are problems in doing what he did. First, the incident occurred about a month ago, and the engineer is just now reporting it. Second, by accessing files and writing to various log files on the system, he made it difficult to distinguish between legitimate activity and hacker activity. In this case, it wouldn't have mattered, though, because the hacker deleted almost every log file on the system.

As a result of this incident, we will now use a secure baseline to ensure that all of our systems, even in labs, are configured securely. We will also temporarily configure an intrusion-detection system sensor to watch the traffic on the lab network segment. Perhaps the hacker will try to gain access again. I will also suggest that all logs be redirected to a central, secure server.

The problem with security incidents in a large, worldwide enterprise is that individuals don't know how to respond when they encounter hacker-like activity. They need to understand that certain actions must be taken immediately in the event of a suspected security breach that involves unauthorized server access. In some cases, for instance, the administrator should create a mirror image of the victimized system right away. That way, the evidence is preserved before the administrator makes the changes required to bring the system back online.

For example, the shell history file, which contains a record of keystrokes issued by the user, typically contains incriminating evidence of hacker activity. If the administrator has changed the system since the incident, it's difficult for the investigator to tell which activity can be attributed to the intruder.

To address this problem, I've decided to put together an incident reporting program. The first part of the project will involve creating documents to assist both Unix and Windows NT administrators in evaluating their systems when they suspect that there has been a compromise. I will also provide awareness-training documents focused on incident response.

Finally, I will ask the database team to create a database and an associated Web-based front end to facilitate the submission of incident reports. The results can then be e-mailed to my team, and we can take appropriate action.

WHAT DO YOU THINK?

This week's journal is written by a real security manager. "Mathias Thurman," whose name and employer have been disguised for obvious reasons. Contact him at mathias_thurman@yahoo.com, or join the discussion in our forum:

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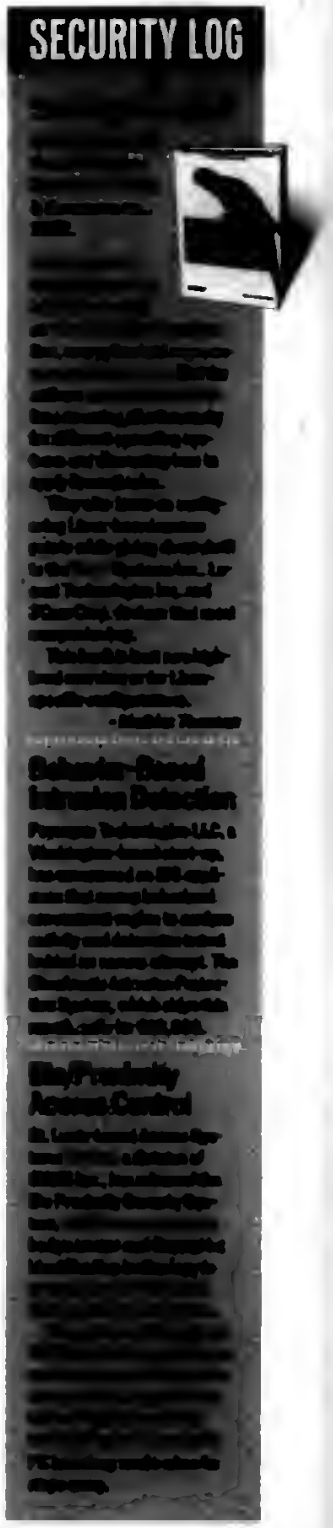

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Palm's Tungsten T

Palm Slashes Pricing to Match the Competition

Palm Inc.'s Solutions Group cut prices on three of its most popular handheld computers last week.

Palm slashed prices on its flagship Tungsten T handheld by 20% to $399. The company also dropped the suggested selling price of its Palm m130 handheld to $199 and cut the price of the m515 by 14% to $299.

Sam Bhavnani, an analyst at ARS Inc. in La Jolla, Calif., said the price cuts are "normal and cyclical" adjustments as Milpitas, Calif.-based Palm readies the introduction of new models, which he anticipates will occur within a week.

The new pricing also brings Palm's products more in line with low-priced hardware running the Pocket PC operating system from Microsoft Corp., Bhavnani said.

Hewlett-Packard Co. has slashed prices on its Pocket PCs, which sold for more than $700 a year ago. HP now offers an entry-level model priced at $299. Dell Computer Corp. sells a Pocket PC device for $249 — up from its introductory price in November of $199, after a $50 rebate.

But according to Bhavnani, there is no comparison between the Pocket PC Tungsten T and the Dell Pocket PC. The Tungsten T, he noted, is a sleek, lightweight system with built-in Bluetooth wireless capabilities, whereas the Dell Pocket PC is bulkier with no built-in wireless functionality.

— Bob Brewin

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BMC Upgrades Server Management Software

BMC Software Inc. in Houston today is announcing new server management capabilities for Windows and Unix servers. The Patrol for Windows Servers 3.0 release and Patrol for Unix 8.0 each will sell for $815 per license and are generally available now. The upgraded products feature event notification to administrators through paging and e-mail. Other new features include improved workflow and preconfigured settings for quicker installation, said BMC.

Proxim Announces New WLAN Architecture

Proxim Corp. in Sunnyvale, Calif., recently announced a wireless LAN architecture that's intended to simplify corporate WLAN deployments and centralize the intelligence of the network. Maestro, which will be available later this year, will allow large and midsize businesses to integrate, configure and centrally manage their WLAN infrastructures simultaneously while supporting mobile voice, video and data applications. Maestro will provide policy-based wireless network administration and support the company's Orinoco line of access points. Pricing information isn't yet available.

IBM, AOL to Integrate Instant Messaging Clients

IBM and America Online Inc. announced last week that they plan to integrate their respective Lotus Sametime and AIM Enterprise Gateway instant messaging clients. The gateway device, which FaceTime Communications Inc. in Foster City, Calif., is building, won't allow external AOL users to detect or communicate with Sametime users, but it will allow Sametime users to access the public AOL network via a single log-in. Both companies said they plan to continue testing the interfaces during the next few months.

NetSupport Updates Desktop Management App

NetSupport Inc. has released Version 8.0 of its NetSupport Manager (NSM) remote-control desktop management software, which is designed to let IT employees troubleshoot and fix users' PCs from remote locations. NSM 8.0 includes the new Internet Gateway feature, which allows for seamless HTTP connections between PCs even if they're behind different firewalls, according to Alpharetta, Ga.-based NetSupport. Per-license pricing starts at $99 for one user and decreases as the number of licenses ordered increases.

App to Convert OS/400 Output to Other Formats

Help/Systems Inc. recently announced the release of its Robot/Transform product, which is intended to convert OS/400 output with embedded graphics into commonly used formats such as Portable Document Format (PDF). The product will allow the conversion of ASCII-based spool files containing Printer Control Language and Advanced Function Presentation attributes into PDF files natively on IBM iSeries servers, according to the Minnetonka, Minn.-based company. Robot/Transform will be available in mid-April; pricing is available upon request.

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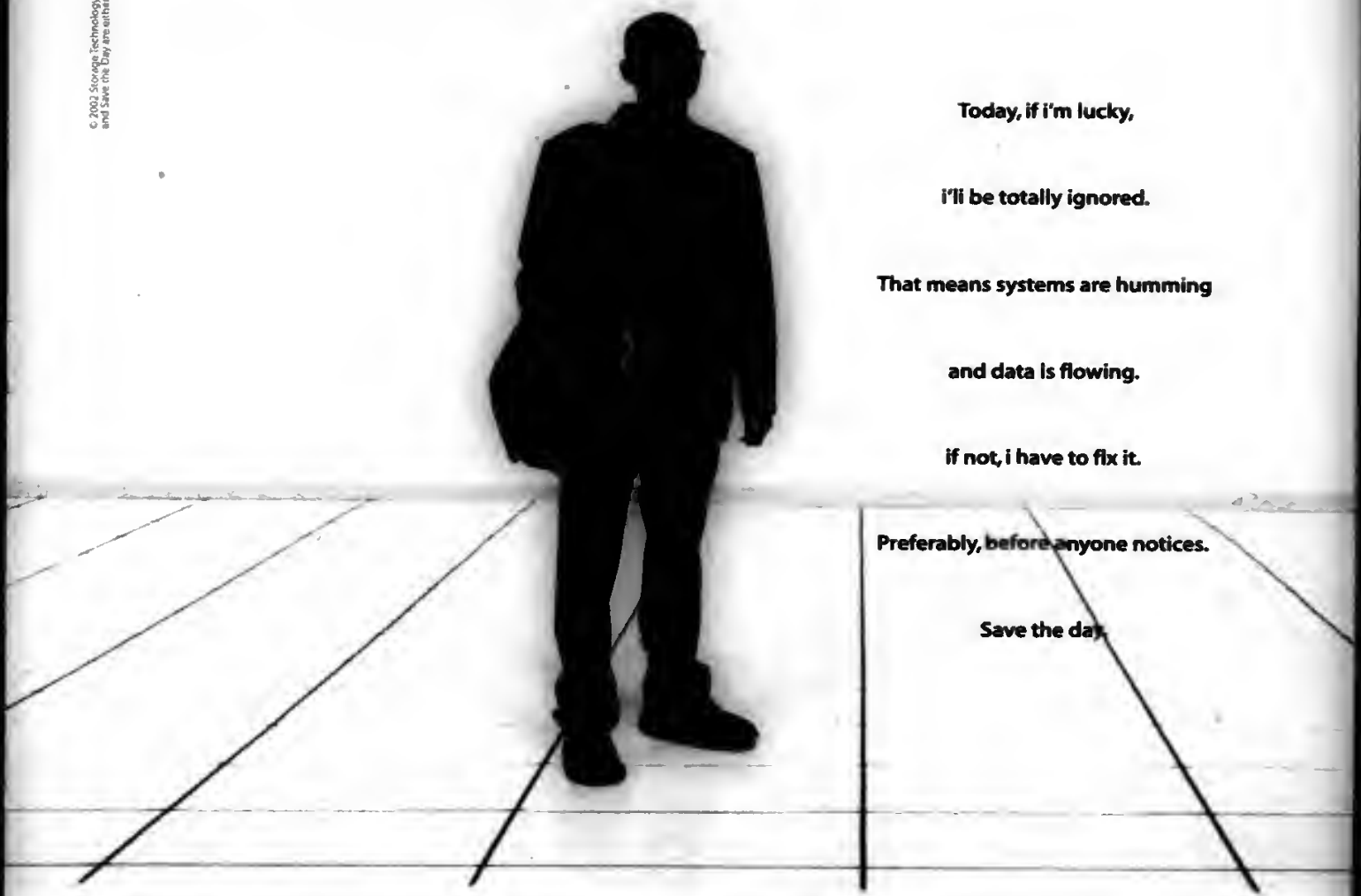

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and data is flowing.

if not, i have to fix it.

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BRIEFS

Survey Cites Data Warehouse Failures

Forty-one percent of the respondents to a recent survey said their organizations have experienced data warehouse project failures, and only 15% said they believe their data warehousing efforts have been successful. Of the 142 companies worldwide surveyed by Cutter Consortium in Arlington, Mass., only 27% expressed confidence in data warehouse technologies, and 21% said they're using data mining technologies they developed in-house.

CA Introduces Unicenter Upgrades

Computer Associates International Inc. is shipping new versions of its Unicenter Database Management software for IBM's DB2 database products on the z/OS and OS/390 mainframe systems. The new versions include increased integration and proactive management capabilities, CA said. Pricing starts at $5,000.

Haht Releases v7.1 Of Commerce Suite

Haht Commerce Inc. in Raleigh, N.C., has shipped Version 7.1 of its Commerce Suite. The new release has demand chain management options for manufacturers of chemicals, consumer products and industrial hard goods such as plumbing products. Prices range from $75,000 to $250,000.

Ipswitch Enters Enterprise IM Fray

Ipswitch Inc. is joining the instant messaging (IM) wars with its Ipswitch Instant Messenger. Designed for corporate use, the new product will cost $695 for an unlimited number of users and will offer secure managed IM capabilities with full message logging and encryption. Lexington, Mass.-based Ipswitch said the system will include personal contact lists and other familiar IM features.

NICHOLAS PETRELEY

Getting Out the Crystal Ball

EVERY YEAR after the dust of the holidays settles, I like to wipe off the old crystal ball and take a peek into the future of IT. Before I get started with this set of predictions, allow me to boast a moment about my record. My predictions may not pan out as quickly as I expect, but they usually come to pass.

I began talking about Linux in 1995. In 1996, I was one of the few to predict that it would become a mainstream server operating system. In 1997, I predicted that it would supplant Windows NT as the future server platform of choice when others were still saying it had a snowball's chance in hell. When Oracle gave a thumbs up to Linux in mid-1998, IBM still insisted that it had no intention of supporting the platform. Nearly five years later, IBM adores Linux, now the fastest-growing server platform. Score a big one for the Petreleymeister.

Network Computing Inevitable

This year's first prediction isn't a new one, but an extension of a previous prognostication that hasn't yet been fulfilled. As unlikely as I'm sure it seems, I predict that the era of network computing is still inevitable.

Granted, it seems very unlikely. I'd love to say that the death of the network computer has been greatly exaggerated, but it hasn't. It's difficult to find anyone discussing the concept of a network computer, let alone locate someone actually using one. Strictly speaking, every X Terminal qualifies as a network computer, but you won't find many of the cheap, Java-based desktops that Oracle, IBM and Sun had hoped would flourish.

Nevertheless, I predict that the Java-based network computer will rise again — and perhaps fall again. But it will eventually be a smashing success.

Java on the Client

My next prediction is a prerequisite of the last one and one of the reasons I still feel bullish on the network computer: The next two years will see a huge revival of interest in Java on the client. This will catch many people by surprise, especially after client-side Java was soundly trashed by embarrassing failures like Java-based WordPerfect Office.

One indication that Java will enjoy success on the client is that the platform neutrality of Java has improved dramatically over the past few years.

Java's performance has improved, too, but not so much that feature-laden Java programs run as fast as equivalent applications written in C. That performance penalty isn't bad news, though, at least for companies desperate to find a good reason to convince you of the need to upgrade your overpowered desktop PC.

But the most compelling sign that Java is headed for the client is that there are now a handful of extremely powerful open-source development environments written for Java and written in Java. There's NetBeans, Sun ONE Studio (based on NetBeans), Eclipse, jEdit and more. The only reason open-source development tools exist for any language is to scratch an itch. The fact that so many excellent tools now exist for Java and are written in it should tell you that there are a lot of itchy Java developers out there with loads of talent for writing client applications.

Sun is probably the only factor that could thwart this prophecy. Often, the company is as much of an impediment to Java's progress as it is responsible for that progress. The success of Linux was easy to predict because the momentum of Linux and open source doesn't depend upon any single provider. That's why the rate at which government agencies, power utilities, retail chains and high-profile companies are migrating to Linux continues to increase, even as Linux distributors drop like flies. But if Sun folded tomorrow, confidence in Java would suffer. The result would probably be fatal unless a company like IBM snatched up Java immediately.

Microsoft Targets Home Media

My last prediction is that Microsoft will temporarily give up on winning the server market and refocus its attention on undermining and destroying competition for the home media center. Along the way, Microsoft will change product names and technology terms at least twice. "Windows .Net Server" is already history, as is "Palladium." It's a long shot, but thanks to Slammer, we might even see a new name for SQL Server. ◗

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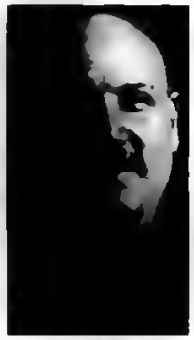

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What CIOs Need From IT Suppliers: A Baker's Dozen
Deciding which suppliers to retain is a complex decision. Columnist Bart Perkins offers CIOs a checklist they can use to help them decide which suppliers should be on their A-lists. **Page 48**

QuickScan: Training
United Stationers CIO Ergin Uskup relies on employee feedback to evaluate training options. Here's a look at some of the hottest IT certifications for this year. **Page 47**

QUOTE OF THE WEEK

"I'm a fan of leverage, and I think partnerships with world-class providers at the infrastructure level, at the application level and at the services layer all make a ton of sense. They'll certainly be the blades in my Swiss Army Knife going forward."
– John McKinley, CTO at Merrill Lynch. Page 48

Play SQUEEZE

CIOs scratch for yet more ways to hold down IT spending. By Thomas Hoffman

Having spent the past two years paring back staff, consolidating servers and storage equipment, renegotiating vendor contracts and conducting selective outsourcing, CIOs are struggling to find new ways to reduce costs without cutting into the muscle of their IT operations.

"We've done all those things, and yet management still wants us to cut costs further," says a CIO at a Midwestern bank who requested anonymity. "I just don't know where else to cut."

In their quest to come up with even more ways to keep a lid on costs, dauntless IT leaders are exploring everything from barter agreements with vendors to reselling services and joining purchasing consortiums for volume price discounts on equipment.

Take Wyndham International Inc.'s chief technology officer, Mark Hedley. Like many IT executives, Hedley has taken advantage of the cutthroat competition that the economy has stirred up in the telecommunications sector and has reworked the hospitality firm's private branch exchange, data and voice networking agreements, thus paring $850,000 from the Dallas-based company's annual telecom budget.

Now Hedley is considering shifting Wyndham's private frame relay to the public Internet as a way to further reduce data communications costs by as much as 50% annually. But he must weigh the potential money-saving benefits of doing so against the security, stability and reliability issues involved with moving to a public network infrastructure.

He and his team are also evaluating a number of even more novel ways to cut IT costs. Among them is the possibility of offering hardware vendors hotel rooms in return for computer equipment.

"Trading the value of a guest room for the value of equipment is very doable for us," says Hedley. Last summer, Hedley and his team began evaluating which IT projects might be a good fit for these types of barter arrangements, but he declined to discuss them further. And while he also declined to name

Continued on page 42

Play SQUEEZE

Continued from page 41

the vendors he has discussed this option with. Hedley says the potential for establishing such deals is "very real."

Shared Savings

Many organizations have centralized their IT operations to help rein in costs over the past few years. But some global firms, such as Madison, N.J.-based Wyeth, a $14.6 billion pharmaceutical company, have taken centralization a step further and shifted to a shared-services model in regions where they've determined that it's efficient and cost-effective.

As a holding company with various businesses, "IT was decentralized, and there was no need to standardize or have a shared-services function," says CIO Bruce Fadem.

Since 1998, Wyeth has been migrating to a shared-services model under which its various businesses and geographic divisions share IT applications and infrastructure and their costs across the organization. Having completed the transition in North America and Latin America, Wyeth is hoping to consolidate the 80% of its European business that hasn't already been folded into the shared-services model. This includes outlying units that still have their own dedicated IT units.

"In 2003, we're doing the tough work, taking those relatively small businesses and working through the political battles" to migrate them into shared services to further reduce costs, says Fadem.

Still, there are limits to applying the shared-services model to all of Wyeth's international entities. In Asia, for instance, the company's divisions are much smaller and more widely distributed than those in other parts of the world, says Fadem. So instead of providing those units with shared services from regional IT centers, Wyeth for now will allow them to operate independently. The company will see how those businesses grow and determine at year's end whether it makes sense to revisit the shared-services model with them, Fadem says.

The cost savings generated so far under Wyeth's shared-services model vary greatly by the level of IT investment in each region and by other geographical differences. Fadem estimates that the approach has led to 10% to 15% cost savings in most regions. Once the European piece of the puzzle has been completed, "we'll be able to implement services like [regional] enterprise systems that we couldn't have done otherwise," he adds.

"We have an aging workforce, and a lot of those people are considering retirement. So as we automate processes, we look for the opportunity not to refill some of those positions."

Diane Bunch, senior vice president of information services, Tennessee Valley Authority, Knoxville, Tenn.

"If you spend twice as many dollars, you don't get twice as much storage or bandwidth. There's a great multiplying effect in the tech business. It ramps up exponentially, not linearly."

John Bielec, vice president of information resources and technology, Drexel University, Philadelphia

Cleaning the Attic

Some CIOs see the increased cost pressures they're under as an opportunity to clean house and get rid of some unneeded or rarely used applications. That's precisely what Tennessee Valley Authority (TVA) has done in conjunction with its migration from Windows 95 to Windows XP, which began in October 2001.

Since then, the Knoxville-based public power company has eliminated 2,300 of 4,700 desktop applications, databases and other software, which in some instances included multiple versions of the same application, says Diane Bunch, senior vice president of information services at TVA. The ability to avoid future PC capacity upgrades is one area of cost savings resulting from the move, since fewer applications mean reduced CPU and storage needs, says Bunch.

The house-cleaning exercise also gave TVA an opportunity to renegotiate site licenses for software that it will continue to use. For example, a reworked contract for a project scheduling package should save the company $40,000 per year, says Bunch. "We're working on several other licensing agreements, and $10,000 here and $5,000 there in cost savings can add up to significant cost avoidance," she says.

Pennies on the Dollar

A growing number of companies are taking advantage of used equipment that's still flooding the market from failed dot-coms and other businesses. Through online auctions, Corning Inc.'s Life Sciences division in Acton, Mass., bought what CIO Howard Piggee describes as some "cheap" servers. The servers cost 50 cents on the dollar and replaced most of the ones that were running the company's PeopleSoft Inc. enterprise resource planning system.

As a result, Corning cut its annual hardware licensing and support costs by $100,000 because the newer servers it bought online are less expensive to run than the older models they replaced.

Power in Numbers

A big-dollar software licensing agreement with a major vendor was placing a drag on Drexel University's IT budget, so John Bielec, vice president of information resources and technology, found himself in search of ways to bring those costs down. Research on the topic led him to a Middletown, Conn.-based educational purchasing consortium called the North East Regional Computing Program, which Drexel joined last year. By doing so, Philadelphia-based Drexel was able to lower its annual software licensing fees with the vendor in question, thanks to special rates for consortium members.

Says Bielec, "There's always power to negotiate if you have volume." ◗

TOP 10 COST-CUTTING TECHNOLOGIES

	TECHNOLOGY	BUDGET IMPACT
1	[redacted]	Business unit
2	[redacted]	Business unit
3	[redacted]	Business unit
4	[redacted]	IT department
5	[redacted]	IT department
6	[redacted]	IT department
7	[redacted]	IT department
8	[redacted]	IT department
9	[redacted]	IT department
10	[redacted]	Business unit

Top 10 Ways to Do More With Less

1 Accelerate time to market of technology-based business initiatives.
EXAMPLE: Lower total initiative costs by restructuring projects to accelerate time to market.

2 Focus on short-term, high-return business initiatives.
EXAMPLE: Take on short-term projects up to two months long that lower business-unit costs and transfer savings to the IT budget.

3 Transfer IT budget money from renewal and enhancement projects to business transformation.
EXAMPLE: Double or triple new-initiative funding by reducing renewal and enhancement project dollars.

4 Selective process outsourcing.
EXAMPLE: Outsource desktop management, PC support and printers.

5 Increase in-house IT staff.
EXAMPLE: Transfer projects that use outside services to internal IT staff.

6 Renegotiate telecommunications contracts.
EXAMPLE: Toll-free numbers, T1s, long distance and virtual private networks.

7 Rationalize and simplify your infrastructure.
EXAMPLE: Simplify server complex to improve use and reduce maintenance and support costs, and to reduce the number of data centers.

8 Improve procurement practices for IT products and services.
EXAMPLE: Restructure procurement to achieve a higher level of discounts.

9 Outsource development and support to offshore providers.
EXAMPLE: Establish targeted levels of outsourcing to lower-cost countries, such as China, India, Croatia and Canada.

10 Review maintenance invoices, agreements and asset lists.
EXAMPLE: Compare maintenance invoices to asset inventory for decommissioned assets.

SOURCE: [illegible]

SQUEEZE Play

Continued from page 41

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SOURCE: INTERUNITY 600 DATABASE AND INTERUNITY RESEARCH 2003

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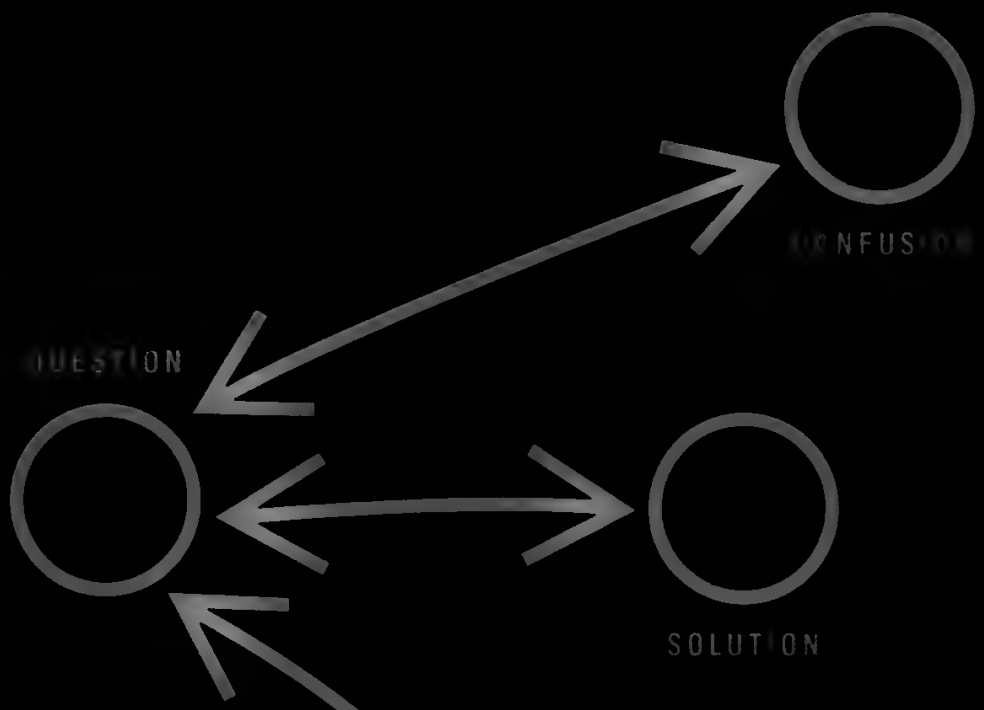
IBM.



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Blind Faith

Why is it so hard to kill certain doomed projects? By Kathleen Melymuka

Everyone has seen it: the IT project that takes on such a life of its own that it becomes virtually impossible to stop, even though all signs point to its ultimate failure. How do projects create this kind of momentum, and why is it so difficult to pull the plug on a clear loser? In this month's Harvard Business Review, **Isabelle Royer,** *an assistant professor at the University of Paris, Dauphine, blames an irrational optimism that blinds everyone involved to the reality of the project. Royer recently spoke with* Computerworld *to explain the origins of this "collective belief" and suggest ways that IT project teams can avoid it.*

You tell some amazing stories about doomed projects that sucked up tremendous amounts of time and resources before anyone pulled the plug. Why do companies often find it so hard to kill bad projects? One could think of managerial incompetence or bureaucratic inertia. What I found is rather that companies cannot envision that the project is going to fail. This happens because there is a collective belief among managers in the eventual success of the project.

What is collective belief, and how does it adversely affect an organization? What I call a collective belief is a strong conviction based on feeling rather than evidence that the project will eventually succeed. This conviction is shared by most of the decision-makers. This collective belief blinds them to negative feedback. Moreover, even when they are able to spot problems, this leads them to increase their commitment and pursue the project more ardently. They are too enthusiastic and emotionally attached to the project to envision a failure.

How does the project champion contribute to this problem? The project champion plays a key role in building and sustaining the collective belief. He or she is usually the original true believer who will spread the belief to others using his or her credibility and charisma. When problems are identified, the project champion participates to sustain the belief by his or her enthusiasm, or even with false reports.

You note that individuals often have their own agendas that strengthen this belief in success. Yes, each individual has personal expectations in a company. The CEO might see the project as a way to sustain activity in a division, the project manager as a road to promotion to a higher position. The belief is adopted more easily and is stronger when it fulfills individual expectations.

What happens to dissenters when you have collective belief? Believers just don't pay attention. When dissenters insist, believers don't address their concern but rather try to discredit them. Typically, they accuse dissenters of a lack of competence. So after a while, dissenters stop voicing their opinion. This gives the impression of unanimity.

I see the danger, but how can you rally a project team unless it truly believes in the project? At the beginning of a project, there is lots of uncertainty, especially when the project is highly innovative. Belief is needed to start a project, since evidence is lacking. But as the project unfolds, data amass that allow checking whether this belief becomes reality or not. When the collective belief is too strong, team members don't interpret negative feedback as a sign of failure.

Know Your Champions

The types of individuals who gravitate toward the project champion and exit champion roles are similar, says Isabelle Royer, but there are key differences in the way their roles play out:

Operates in an uncertain, ambiguous environment.	Removes ambiguity with hard evidence.
Violates or overrides procedures to remove obstacles to a project.	Restores procedures to ascertain project viability.
Risks reputation if project fails.	Risks reputation by challenging popular project.
Willing to take the initiative to assume critical roles that aren't assigned.	
Are energetic and determined enough to overcome obstacles, skepticism.	

Most IT projects have to pass periodic gateway reviews before they can proceed. Doesn't that solve these problems? This is only a first step. Periodic gateway reviews are set up to evaluate the project and decide whether to continue, stop or modify it. When a collective belief dominates, the review process is not followed rigorously. For instance, rather than checking that a problem has been solved, saying that the solution is at hand would be enough to go ahead.

You talk about some early staffing decisions that can short-circuit the development of collective belief. Tell me about those. Oftentimes, managers staff project teams based on enthusiasm to participate and good personal relationships. In doing so, they create a cohesive group of believers that will have a tendency to escalate. To avoid that, it's important to involve people who are more skeptical and able to point out potential problems. It is also important to replace some of the decision-makers during the course of action, because newcomers will look at the project with fresh eyes.

But smoothly running, cohesive project teams are the Holy Grail in IT. Wouldn't this approach jeopardize that goal? This is a matter of balance. Personal rivalry or dissent in a group would jeopardize the goal, but so would too much cohesion. When the cohesion is too strong, there is no debate whatsoever inside the group about the project. Skeptics in a group ask for more explanations and evidence than others [before they will agree to move ahead]. This might lead to a conflict, but a positive one, leading to better evaluations and decisions.

Above all, you stress the need for an "exit champion." Who is that, and what does he or she do? Well, when most of the people involved are blinded by their belief, and when the procedure is lenient, failing projects are unlikely to be stopped without an exit champion. Exit champions take the initiative to defend exit, which will usually lead to conflict with believers. To convince others that exit is a better course than continuation, they have to bring evidence, which usually means introducing or restoring a rigorous evaluation procedure. This role requires many qualities similar to those of champions, such as credibility and risk taking.

What's the difference between an exit champion and the kind of naysayer that can sap the life out of a project team? Naysayers are known to always have a negative opinion, which undermines their credibility. On the contrary, the exit champion is not always negative. Many of them have also been project champions in the past. Further, naysayers usually merely voice their negative opinion, whereas exit champions take action to defend exit.

Exit champion seems like a thankless role. How do you get it to be valued in the company so people will step up to this role – and be listened to when they do? Top managers may point out they value this role by telling stories of courageous exit champions who saved their organization millions of dollars. They should at least make it clear that challenges to a popular project are welcome. At the same time, they need to demand strong evidence regarding the need to end a project. Failing to do so would systematically favor exit, which would discourage new projects. Here again, there is a balance to be found. ▶

PROJECTS IN THE BLACK

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This is the latest in a series of monthly discussions with authors of articles in the Harvard Business Review on topics of interest to IT managers.

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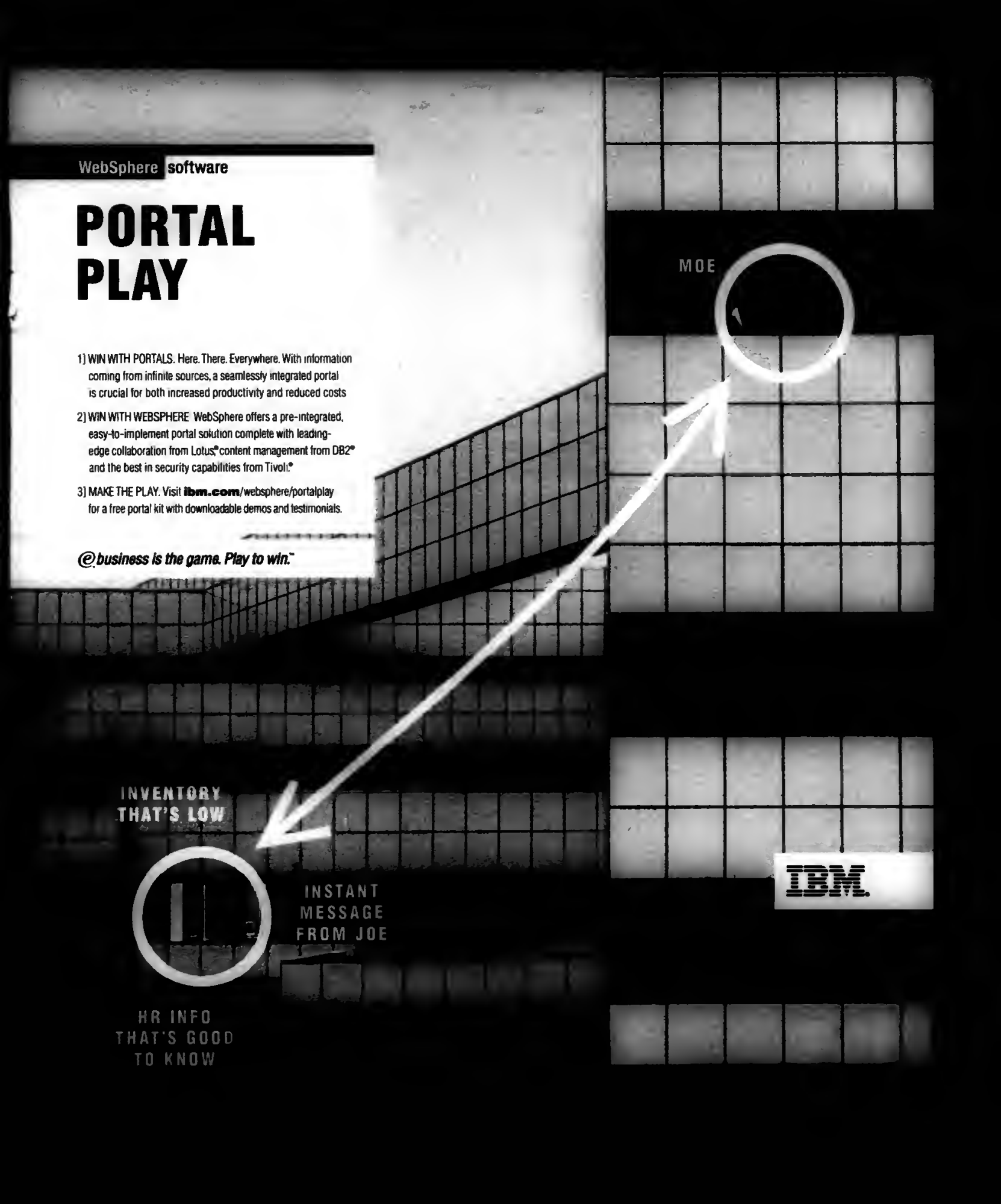
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2) WIN WITH WEBSPHERE. WebSphere offers a pre-integrated, easy-to-implement portal solution complete with leading-edge collaboration from Lotus® content management from DB2® and the best in security capabilities from Tivoli.®
3) MAKE THE PLAY. Visit ibm.com/websphere/portalplay for a free portal kit with downloadable demos and testimonials.
e business is the game. Play to win.™
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INSTANT MESSAGE FROM JOE
HR INFO THAT'S GOOD TO KNOW
IBM

A CIO's First Year on the Job

Sony exec talks about cutting costs and taking the mystery out of IT. By Jean Consilvio

Despite what has been one of the worst years for the economy, especially in the IT sector, **Jim Milde** *says he has accomplished just about everything he said he would when he took over as CIO of Sony Electronics Inc. last January. For starters, he helped develop solid business cases for Sony's IT projects by working with different functional departments to prioritize investments and quantify their returns. Another key goal he set and met is moving toward common processes to increase the overall efficiency of IT.*

As CIO, Milde is responsible for all IT within Sony's electronics division, which comprises about 20,000 users, eight major manufacturing operations and 100 other facilities in the U.S. Milde says Sony views the CIO role as much more strategic than other companies he has been with in the past did. He spoke with Computerworld about how he has worked to drive business change while making sure that Sony gets the biggest bang out of its IT buck in his inaugural year on the job.

What has been your biggest challenge in the past year? The biggest challenge would be repositioning IT with the business. The way we went about doing that was really just by building the level of credibility and taking the mystery out of IS — from a cost perspective, from a service perspective, from new investments and how we improve and fund projects. And most important, a lot more rigor on the ROIs of those investments. What we found was that there waso't a good understanding of what the investments were being spent on. And [we] started putting up screens for [justifying *IT* project investments].

How did you accomplish all that? We did set up fairly active business-governance groups. Those groups have decision-making within their areas, and then broader questions go across the various constituencies for prioritizing of projects. But it's not easy, because everyone wants what they want, and no one wants to hear about someone else's project being screened against their project. We've been very successful at just building that relationship, the process for governing and taking the mystery out of the IT spend. And quite frankly, partnering — I hate to use that word — but truly having a seat at the table on these major structural things we're looking at that have major IS investments behind them.

How do you go about determining the ROI for these projects? We try to think about every investment dollar we spend, whether it's on routers or whether it's on applications. So [the] first thing is categorizing all of our investment dollars that we spend. The second thing we've done is taken all the "shadow *IT* spend" out of the business and put that all on the table so we have a true look at our total IS investmeot spend. Then we go through, and for every single project [we determine if it's] for legal reasons, R&D compliance reasons, or is there real hard-dollar ROI that's either going to drive efficiency or top-line sales growth. Then we start to screen those projects against what applications we are building them on to ensure that we eventually have a more simplified application portfolio. And we've got tools in place now so that every project goes through a request and we can sort the projects by these different types of categories.

Lastly, on the [projects] that are approved with the ROIs, we are working with our corporate planning group to go into the business areas and really identify where those hard dollars are going to be saved out of the business departmeotal budgets. A lot of companies say there's an ROI, but you never capture the savings in the busioess area.

How do you get business to buy in? My first few mooths just talking to people I always asked: "Well, tell me what success would look like from a business perspective for what IS needs to do," and it was remarkable that a lot of people couldn't answer what were the three things they would want to see different. So we put out a very formal questionnaire to the top 500 executives across Sony Electronics, conducted by Gartner Inc. It essentially gave specific questions and things that we wanted opinions on. And quite frankly, it wasn't that positive of a scorecard. But my point is, we're trying to lead by saying, "Tell me the things that success would be predicated on, from the voice of our customer." We're taking a Six Sigma approach toward this, and people are starting to see that we do want to make sure that we're hearing the voice of our customers.

And now we've got actionable measures against areas that we have opportunities to improve on and communicate that back to the business. It's always risky doing that, because people can just kick the IT dog if they want to. But the only way I know to improve is to hear what people want improved. And when people can't articulate what they want improved, I know there's educating that we have to do to take the mystique out of IS. . . . It's building the credibility and the trust. ◗

PROJECT UPDATE

To learn more about changes Jim Milde has made within Sony's IT organization and updates on specific projects, go to:

QuickLink 36187
www.computerworld.com

[QUICKSCAN: Training]

The 10 Hottest IT Certifications For 2003

The following ranking is based not on the most popular certifications, but rather on the fastest-growing certifications in the industry, according to Becky Nagel, editor of CertCities.com. The online magazine for IT professionals surveyed its readers to come up with the following list of hot IT certifications for this year. For each certification considered, CertCities compared the number of respondents who said they hold a particular certification with the number who said they would be getting the certification within the next 12 months.

1. Cisco Certified Internetwork Expert (CCIE)
2. [redacted]
3. Red Hat Certified Engineer (RHCE)
4. [redacted]
5. Certified Information Systems Security Professional (CISSP)
6. [redacted]
7. Linux+
8. [redacted]
9. Sun Certified System Administrator for Solaris Operating Environment
10. [redacted]

For more information, go to www.certcities.com.

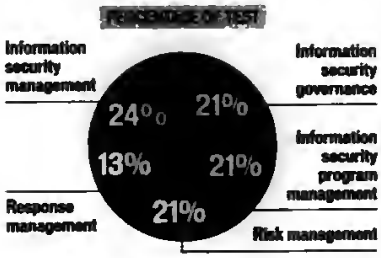
The Top 10 'Most Promising' Technologies

1. Wireless: 3G, 802.11, LAN/WAN, cell phones, radio frequency identification (RFID)
2. [redacted]
3. XML
4. [redacted]
5. Vertical industry-specific technologies
6. [redacted]
7. E-commerce: Electronic data interchange (EDI), transaction processing
8. [redacted]
9. Customer relationship management (CRM)
10. [redacted]

SOURCE COMPUTERWORLD'S 2003 PREMIER 100 IT LEADERS SURVEY

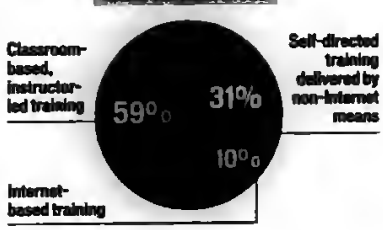
New Security Certification Tests Begin in June

The Information Systems Audit and Control Association in Rolling Meadows, Ill., will begin offering the examination for its new Certified Information Security Manager (CISM) designation in June. The exam will cover the following areas:



For more information, go to www.isaca.org.

How Companies Deliver IT Training



SOURCE DATAQUEST INC. SAN JOSE OCTOBER 2002

Evaluating the Cost-Effectiveness Of Training

Getting feedback through surveys or informal post-training interviews is a good way to measure the effectiveness of your IT training, managers say. At United Stationers Inc. in Des Plaines, Ill., IT employees fill out a questionnaire following an IT training session, says Ergin Uskup, CIO and senior vice president of MIS. The company's training manager then has one-on-one follow-up conversations with employees to see whether the experience met their needs and whether they would recommend the class to colleagues.

Three months later, the training manager checks in again with employees and their managers to see if the training helped the employees improve their skills. Managers then act on the information gleaned from these conversations. United Stationers, which allocates about $450,000 per year to train about 250 IT employees, enters into partnerships with training companies that receive a high rating and drops those that perform poorly, says Uskup.

Train Workers 'Just in Time'

Another way to maximize training dollars, say managers, is to put the trainee's new knowledge to work right away. At United Stationers, employees get to work on projects related to their training immediately after classes about 75% of the time, says Uskup. In addition, the company gives priority to skills training that employees will need in the short term.

"We always try to match training with a task," says David Molchany, CIO of the Fairfax County government in Fairfax, Va., which annually spends $600,000 on IT training. Managers work with employees to create a plan for trainees to use their know-how soon after a class. For instance, if staffers attend training on installing Microsoft Corp. products, they might use what they learned when they return to work by performing a software implementation. Molchany calls this "just-in-time training."

— Julia King

Where Certifications and Paychecks Meet

The following lists show the median premium pay as a percentage of the base for each of the highest- and lowest-paying certifications:

Highest Paying

Lowest Paying

SOURCE FOOTE PARTNERS LLC, NEW CANAAN, CONN., FOURTH QUARTER 2002

BART PERKINS

What CIOs Need From IT Suppliers: A Baker's Dozen

MANY CIOS ARE reducing the number of IT suppliers they use in order to consolidate purchasing and cut costs. Deciding which suppliers to retain is a complex decision. Here's a checklist you can use to decide which suppliers should be on your A-list. CIOs need suppliers to do the following:

1. Deliver quality products that solve problems. Suppliers must provide solutions that address the needs of the IT organization and not merely push their latest products. This requires careful listening and adaptability on the supplier's part. A supplier worth retaining won't deliver just a standard set of PowerPoint slides.

2. Present a business case. Suppliers should provide a customized business case that clearly describes scope and objectives and calculates return on investment. Returns should be measured using the same metrics that your IT organization uses to evaluate other investments (such as ROI or net present value).

3. Sell through the IT organization. Many suppliers jeopardize IT continuity and antagonize the CIO by attempting an end run, selling directly to business units or other non-IT executives. Suppliers that take this approach may make the sale, but they often fail to understand the company's overall, long-term IT plans.

4. Leash their sales forces. Historically, many IT suppliers have overpromised and underdelivered. If you have suppliers that have oversold you, the last thing you want is to re-up for a repeat disappointment.

5. Offer enterprise agreements. In many organizations, multiple business units have separate contracts with the same supplier. You will want to reward suppliers that offer enterprisewide deals without being asked.

6. Find creative ways to meet customer objectives. For example, a software supplier could offer annual rental contracts, rather than perpetual licenses, to flatten customers' spending. Similarly, if a product is easy to install, the supplier could offer potential customers a free trial.

7. Adopt a long-term perspective. CIOs who contract with IT suppliers usually take a multiyear perspective due to the impact on the infrastructure and the high cost of switching suppliers midstream. Similarly, CIOs need suppliers to broaden their perspectives beyond end-of-quarter concerns and focus on building effective long-term relationships.

8. Communicate effectively. The CIO needs concise reports on key messages. Status changes, especially bad news, should be communicated immediately to give the customer time to make necessary adjustments. No one can afford to be blindsided by bad news — especially a CIO, whose success is greatly impacted by the performance of critical IT suppliers.

9. Deliver on their commitments. Look for suppliers willing to earn your trust by doing what they promise, when they promise, at the agreed-upon price. Standout suppliers do more than the contract requires.

10. Provide a consistent account team. Every new person the supplier adds to the account team must be educated about your needs and culture. Staff continuity saves time, effort and frustration for both the IT organization and the vendor.

11. Be visible and available. Beware of suppliers that disappear as soon as the product is delivered. The quality of the supplier's aftermarket support is critical and can largely determine the climate for the next contracting effort. In one case, a vendor signed a strategic agreement with a very large customer. Then, for the next 18 months, the sales representative failed to call on the CIO, reasoning that the CIO "did not want to be bothered." When the CIO tracked the sales rep down, the CIO told him that the contract wouldn't be renewed.

12. Use a customer-centric incentive program. Many suppliers' incentive programs reward sales efforts — at the expense of customer satisfaction and retention. Look for suppliers with sales and satisfied customers. Both goals should be reflected in an effective incentive plan. Look for sales plans that delay part of the commission until the product operates successfully.

13. Provide an executive-level feedback channel. A key supplier executive should monitor service and relationship quality. Suppliers that wait to talk to the customer until contract renewal time may find that it's too late to appease an unhappy customer.

Addressing these needs will significantly increase a supplier's value to your IT organization. Consistent delivery, effective communication and integrity form the foundation for a long-term, mutually beneficial relationship. Suppliers that demonstrate these characteristics are the ones to whom you should offer future business and select as trusted advisers.

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NEWSMAKER

Later this month, Chief Technology Officer JOHN McKINLEY JR., who heads Merrill Lynch & Co.'s global technology and services unit, will leave the New York brokerage after more than four years on the job. McKinley was instrumental in crafting many key outsourcing partnerships, rolling out Linux in the data center and helping the firm recover quickly after the Sept. 11 terrorist attacks.

In the coming weeks, McKinley says he'll be searching for a position in the technology sector, where he got his start. He also hasn't ruled out starting his own company. He spoke with *Computerworld*'s Lucas Mearian about his experience at Merrill Lynch, team building and the future of Linux.

Why are you leaving Merrill Lynch? It's been a great run being at Merrill, almost four and a half years. I've been a CTO for about eight years, first with GE Capital and then with Merrill. I think it was a great experience, but I cut my teeth in the systems integration business, growing up at Ernst & Young. I really do want to get back to a frontline position, potentially an operating role in a technology company. The dialogues I'm having now are along those lines.

Why would you want to re-enter the technology sector now, when it's having such a hard time? I really believe we're only into the second chapter of the technology story in terms of its impact on business. I really believe if you wait for a market space to be validated, the value-creation opportunity is gone. This is a sector that's not for the faint of heart, but there are still so many rich veins to mine in terms of opportunity that it's just too compelling to me.

Any fields you're looking at? There are a number of ones I'm looking at now across the gamut in the software space, the wireless space.

What was the most difficult thing you did while at Merrill Lynch? The most difficult thing the entire team

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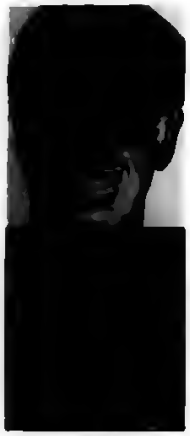

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Any fields you're looking at? There are a number of ones I'm looking at now across the gamut in the software space, the wireless space.

What was the most difficult thing you did while at Merrill Lynch? The most difficult thing the entire team

did was rebuilding the firm after 9/11, establishing three new trading floors in six days [and] rebuilding wholesale portions of our global network. It required incredible creativity, but also heroism and commitment.

What do you consider your next big challenge? Ultimately, every experience you do has to be a growth experience. We're in a profession where 50% of skills are obsolete in three years. So if you're not constantly challenging yourself to grow and expand, you're doing yourself a huge disservice.

The biggest litmus test for me is, Do I have a passion about the space that company is in? Do they have something that represents sustained competitive advantage? And is there a cultural fit?

Considering your philosophy at Merrill Lynch of outsourcing anything and everything that can't be done by your in-house team, do you think they'll continue on that way? Your biggest sustaining contribution to an organization is the talent base you developed over your tenure. We've got the best technology team on Wall Street. I think that mastering being a virtual organization is something we've worked hard at over the past few years, and it's something that will continue going forward. It just makes too much sense.

It's all around looking at [business process outsourcing] opportunities, partnerships at the infrastructure level and next-generation ASP opportunities. For us, an example of our philosophy is the deal we brokered with Thomson Financial to put in all new broker technology. I think you'll see more plays of a similar nature going forward.

Will you also try to start virtual Web partnerships with other providers wherever you go? I'm a fan of leverage, and I think partnerships with world-class providers at the infrastructure level, at the application level and at the services layer all make a ton of sense. They'll certainly be the blades in my Swiss Army Knife going forward.

If there's something you could share with others, what would you say you have learned as a CTO? A lot of the best practices in managing a technology function can be stolen from the business playbook. Great organizations are value-based. People who share a common set of values, understand [how to] reward behaviors and understand what dials to turn in terms of progressing their own careers. Doing a few things well is a winning playbook.

> **Your biggest sustaining contribution to an organization is the talent base you developed over your tenure.**
>
> JOHN MCKINLEY, CTO, MERRILL LYNCH & CO

If we look back at the period of '97 to 2000 – that technology exuberance era – I think in our profession we were probably not very good portfolio managers. We wound up working on the A-list but also were working on the B-list and half the C-list. I think that leads to lackluster benefits. You spread your talent base [and] your resources too thinly.

I think the third thing is that it's all around focus on measurement and making sure you have the right infrastructure in place for everything, from service quality to fully understanding your unit cost of service delivery.

Ultimately, if you can't measure it, you can't improve it. Investing in your processes and your infrastructure supporting IT as a business is critical.

How big a role do you see Linux playing in companies like Merrill Lynch? It's a vendor-agnostic technology which provides a lot of opportunity for tapping into innovation from multiple suppliers, but it's also about managing your cost base more effectively. I think that Linux is powerful because it scales up and scales down. You can get a scaled-down Linux kernel in a 400k footprint. At the same time, you can run 136,000 transactions on a Linux cluster.

Do you see Windows really losing out to Linux in the future? To me, it's all around maintaining choice. The one thing I can guarantee is Linux will be an important tool at Merrill over the next 10 years.

Ultimately, I like to have choice with Linux, and I think our vendors perform better when there's a better competitive dynamic. And I think Linux helps foster a sense of competitive dynamic among all my vendors.

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IT Careers in Cyber Security

SQL Slammer, the worm that infected the Internet on Jan. 27, proved a grim reminder of how cyber terrorism can affect us. ATMs wouldn't dispense money, healthcare facilities lost file search capabilities, and messaging worldwide slowed to a crawl.

"(The Slammer) showed how dependent we've become on the Internet but how fraught with problems its security is," says Federal CIO Council member Ira Hobbs, deputy CIO for the U.S. Department of Agriculture. Hobbs, who works on the council's human capital committee, says the group has identified cyber security, solution architecture and project management as the most critical IT occupations to our nation's future. "We believe the future is in dealing with domestic or international cyber terrorism, and cyber security professionals will be the troops," he adds.

Barry Thornton, co-founder and chief technology officer at ClearCube Technology in Austin, TX, is among those who agree. "Ours is a simple solution: deny the bad guy physical access to the herdware and the network," says Thornton of ClearCube's products. Encryption solutions will be the work of mathematicians, he claims, which leaves companies such as ClearCube to develop solutions that prevent outsiders from penetrating a network.

The issue is finding IT experts in cyber security. The Naval Post Graduate School now offers a master's degree program, and the Home Cyber Corps is a federally funded program, through the National Science Foundation, that is building teaching and accreditation capacity at colleges and universities throughout the country. Until this training capacity builds, Thornton and Hobbs have a list of skills for IT professionals interested in cyber security.

"They need a background in hardware and software, project management skills, good analytical skills and intrusion detection skills," says Hobbs. It's the intangible competencies that set cyber security professionals apart – what Hobbs calls the investigative bent and Thornton calls simple imagination. "When I interview an engineer, my main interests are in his or her passion for the art," adds Thornton. "There is little or no 'prior art' for the engineer to draw upon, so imagination must take over. Anything controlled by software can eventually be hacked so this is an intellectual game where the guy with the best imagination, at that time, wins."

The luster on cyber security careers continues to build. Hobbs says every federal agency has new IT security reporting requirements. His agency, the USDA, currently employs 6,000 IT professionals. "Right now, for me, this (building people capabilities in cyber security) has been my world," he adds. "Three to five years from now we'll be dealing with cyber issues we can't imagine now."

IT Careers

For further information, please contact:
Nancy J. Percival, Director, Recruitment Advertising
at 800-762-2977
500 Old Connecticut Path
Framingham, MA 01701
Produced by Carole R. Hedden

Loronix Inc., a company headquartered in Durango, CO that uses digital signal processing (DSP) to provide video security solutions to retail transportation, corporate, gaming and entertainment, and correctional and government facilities, seeks Firmware Engineer to work in Durango to analyze, design, program and modify software using high-level languages and assembly for desktop processors and DSPs. Requires bachelor's degree in Electrical Engineering or Computer Science, one year as a Software Engineer using Digital Signal Processing (DSP) and video compression, working knowledge of JPEG, MPEG-2, MPEG-4, Wavelet Video Compression, Computer Vision and code optimization techniques in C++ and Assembly languages. Respond by resume to Barbara Arndt, Loronix Inc. 1120 W. 122nd Ave., Suite 200, Denver, CO 80234 and refer to job #42571KA.

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Senior IT Consultant - Atlanta, GA. Plan & direct implementation & customization of ERP (Enterprise Resource Planning) systems to fit clients' business needs. Consult w/managerial & systms analyst personnel to clarify needs, identify problems, suggest changes, & determine extent of prgrng & coding req'd. Manage IT personnel in dvlpg, maintaining, improving & supporting ERP sfware implementation projects. Modifies procedures to increase efficiency &/or adapt to new reqmts using ERP systms. Supv overall dvlpmt of prgms. Supv & train subordinates in ERP systms dvlpmt. Proposes ERP systms to clients in achieving bus solutions. BS in Comp Sci or Engg (or foreign equiv) & 5 yrs exp in ERP systms dvlpmt, incl 2 yrs project mgmt exp. $75K. Resumes to: Vedic Group, H.R., 14202 Parkview Lane, Alpharetta, GA 30005.

SOFTWARE ENGINEER. Testing, implementation and customize new software in different operating systems. Deploying desktops and laptops with applications and networking in LAN and WAN. Ability to manage and schedule the installation maintenance and support of different business applications. Ability to work with Windows95, 98, NT and windows 2000. Manage and schedule installation, maintenance and support of Remote Access hardware and software. Job duties are in Analysis of current procedures and problems to refine and convert the data to programmable form, determine output requirements; study existing systems to evaluate effectiveness; upgrade systems presently in use; develop, test and implement new software; observe functioning of newly implemented system and programs for trouble areas, correct systems/programs as necessary. Requires Bachelors in Engineering with 2 years of software development experience. 40 hours p/ w eek at $56,800 per year. Please send resume to Case # 200113807 Labor Exchange Office, 19 Stanford Street, 1st floor, Boston, MA 02114

Sr Technical Consultant. Responsible for working with customers and systems integration partners. Lead business scopes and design workshops; develop, test and deploy billing solutions using MetraTech's methodology and products. Responsible for obtaining and analyzing product and integration requirements, business object functionality and integration with provisioning and customer care systems. Will and knowledge of Visual Basic, NT, COM, MS-SQL Server, C/C ++, Java and Oracle. Requires: Bachelor's Degree in Comp Sci., Engineering or other quantitative field and 5 years experience in programming. 40hrs/wk (8:00 a.m. to 5:00 p.m.); $85,561.00/yr. Send two resumes/responses to: Case Number 200114043 Labor Exchange Office, 19 Stanford Street, 1st Floor Boston, MA 02114

Software engineer wanted by Japanese mobile content services co in San Francisco. Design/devlp wireless applications; confer w/engnrs in Japan re prodct design. Java (Servlet, JSP, JDBC) C, C++, HTML, Javascript, CGI, UNIX, Oracle, Postgres SQL, SQL, DB Design, DB Tuning. Must be fluent in Japanese language. Resumes to Faith West Inc., 500 3rd St, #410, San Francisco, CA 94107.

Millennium International

Accounting Software Developer

Developing Web Enable Accounting Software Packages using Java, C, C++, VB, VB Script according to client requirements.

Requires: 3 yrs. Exp in Software Development. Must demonstrate knowledge of 1) accounting: preparing trial balance, journal entries, profit & loss, bank reconciliation, balance sheet, 2) JavaScript, JSP, HTML, C, C++, VB, VB Script, object oriented design/development techniques, integration design, software testing/debugging skills, SQL and Access, Toad, SQL Station. Fax Resumes to Kapil at 801-771-2360.

Oracle Dbase Administrator. Install up-grade migration, maintenance & performance tuning Oracle 8.x/8i/9i & Oracle R11/R11i on NT & Unix; dbase sizing, cloning & recovery strategies; program in PL/SQL, SQL, Developer 2000 (2.x/6.x/6i) & Siebel.

Senior Siebel Developer. Design-configure BC, BO applets, views using Siebel Tools, Smart Scripts, VB or E-scripting; EIM data loading; program in Oracle 7.x/8.x, PL/SQL, Seagate Reports, Java, & Developer 2000.

Requires Bachelors Degree CS/MIS/IT. 2 years FT paid experience with software & duties above.

Email cio@e-corrsupport.com

Openings for following positions:

Software Engineer (SAP): perform SAP design, development, analysis, coding, testing. Work primarily in SAP R/3, ABAP/4, WORKFLOW and SAP Scripts.

Software Engineer involved in full life cycle from gathering user requirements to implementation and testing. Perform software design and development using primarily Websphere, VisualAge, MQ series and DB2.

Software Engineer perform design, implementation, customization and support of BaaN ERP solution. Design, develop and deploy Advanced Planning Solutions. Work in BaaN, ERP Enterprise Planning, Order Management, Warehousing and BaaN tools.

Apply to: Kalkech International Corp. Attn: HR Dept. 3985 Stone Village Court, Duluth, GA 30097

Oracle Database Administrator wanted for pos in Manchester, NH. Resp for d/base admin & oversight of data load process, maintain d/base security; install & maintain Oracle server & patches; tune & monitor d/base; schedule & monitor backups; recover & trouble-shoot; using PL/SQL & Syncsort, preprocess data for loading into Oracle d/base; create & maintain PL/SQL scripts, write PL/SQL prgms, work w/Siebel team to resolve mapping & data production issues using Siebel EIM dvlp PERL prgms to decode data & extract into other files in read formats. BS in Comp Sci or an Engg field & 5 yrs d/base admin exp incl at least 4 yrs Oracle d/base exp. Send resume to Health Dialog, Inc., 50 State St., 11th Floor, Boston, MA 02109.

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EMAIL ADMINISTRATORS. Duties include: Under general supervision, the Electronic Mail Administrator is responsible for the administration of corporate E-Mail systems and other messaging systems. Duties include: plan, develop, document, and implement enhancements to E-Mail network; monitor, analyze and make recommendations on system configuration, network operations and utilization; implement required back-up and security software, hardware and procedures; test, maintain and troubleshoot software and network problems; configure software to LAN systems and work stations; and evaluate available hardware and software to make recommendations of products for end users. Demonstrates aptitude towards problem identification, resolution and comprehension and interpretation of technical procedures. Min Reqts: BS/BA (foreign equivalent accepted) in CS, IT, Engineering or related field of study AND 2 years of experience in the job offered OR 2 years experience in related occupation as a network or communication administrator or related occupation PLUS must have demonstrated knowledge and work experience with: (1) Messaging systems, technologies and standards; (2) Operating systems; and (3) Windows NT Server/Workstation, Lotus Domino and Notes Administration. Basic pay is $40,000 per year FT and standard company benefits. EEO. Submit 2 resumes and respond to Case No. 200115602 Labor Exchange Office, 19 Stamford Street, 1st Floor, Boston MA 02114

SDG Corporation

Seeks software professionals to work in West Chester, Ohio with experience in any six of the following technologies. Oracle, LDAP, Unix, MS SQL server, Java,Web Logic, Rational Rose, Apache and Planet Server. Oracle Application DBA (Norwalk, CT), required experience in team leadership, designing and administering Oracle, ERP and distributed database architecture solutions under Windows NT and Unix. Relocation within USA possible.

Security Architect (Norwalk CT) required experience in designing, implementing and managing networks based on NT, Unix and Novell including design and implementation of network security systems. Relocation within USA possible.

Oracle Applications DBA - Norwalk, CT. Require experience in team leadership and designing and administering Oracle ERP and distributed database architecture solutions under Windows NT and Unix. Relocation within USA Possible. Attractive compensation package.

Attractive compensation package. Send resume to Catherine Fanucchi @ SDG Corp., 65 Water Street Norwalk, Ct 06854

Vision Consulting USA, Inc. an international information technology consultancy firm is seeking qualified applicants for the following position.

Software Engineer: Develop proof-of-concept and prototype solutions; change management; quality assurance process for increased functionality. Regression testing.

Bachelors or Foreign Equivalent in a Computer/Engineering Sc. discipline with relevant experience.

Resumes only to: Annie St. Hillaire, HR, 110 East 42nd Street, Ste 615, New York, NY 10017

PROGRAMMER/ANALYST sought by LIC, NY-based mattress/sleep prods - wholesale/retail estb to analyze dsgn & dvlp client/server database info systems & customized appl using Oracle, Clipper and FoxBase. Formulate test plans through dvlpmt cycle & integrate diff dvlpmt platforms. Must have Bach Deg in Comp Sc or equiv & 2 yrs exp in job offd. Must be exp'd in Oracle R11.0, PL/SQL, dBase III & FoxBase & must have exp customizing Oracle d/base & forms for retail estb. Send resumes to: VP Quality & HR, Dial-A-Mattress Operating Corp, 31-10 48th Ave, L.I.C. NY 11101

FundQuest, Inc is looking for a Database Administrator to administer and architect financial investment management databases on SQL 2000 Enterprise Server clustered on Windows 2000 advanced server. Please send all resumes to FundQuest, Inc 21 Custom House Street, Boston, MA 02110, attention Human Resources Department

Market-Research Database Designer. Design/manage direct marketing market-research d'base. Establish research structure; gather local, regional, nat. internet, market cond data/determine potential sales using knowledge of market resch methodologies; develop data storage/analysis/forecast sys; prep reports on competitor strength/cust pref. @ 30a-5 30p. Req: Bach Bus Admin in Economics/Finance & 1 yr exp or as Tech MIS Coord &/or Web Developer. Resume T Killebrew, Smartarget Marketing, 725 Broad St, Augusta, GA 30901

DATA MANAGEMENT ASSOCIATE (DATABASE DEVELOPER) sought by pharmaceutical research and development company in Wallingford, CT. Candidate must have a minimum of a Bachelor of Science degree in Applied Mathematics, Statistics or Computer Science (with coursework in applied mathematics or statistics). Knowledge of data management and process data collection and evaluation a plus. Strong leadership and communication skills required. Send resumes to: Strategic Staffing Specialist, Job Code TN-684, Bristol Myers Squibb Co., P.O. Box 4000, Mail Stop E14-12, Princeton, NJ 08540

VP Senior Systems Engineer sought by NY based Dealer Broker and Financial Investment Company. Must possess Bachelor's Degree or equivalent in Computer Science or directly related field and 5 years experience in network management, design and analysis within a UNIX (Solaris), Windows NT and Cisco operating system. Working knowledge of TCP/IP, LAN/WAN, C/C++, Java or Perl. Respond to: Human Resources Department: Commerzbank Securities, 1251 Avenue of the Americas, New York, NY 10020-1104

Optimization Implementation Analyst. Optimize collaborative logistics solutions developed in internet native architecture, must: tenant models w/on demand scalability & device & protocol independence & zero fault security; form math models for optimization apps & develop algorithms to solve models; develop heuristic & local search algorithms for vehicle routing problems in C++ & using ILOG Opt Suite Libraries & TMS Opt. C++, J2EE, XML & Oracle. Deliver via SOAP & JNI/RMI. Req: MS Comp Sci & grad edu in Algorithm & Data Structure. Resumes to: M. Cannady, Elogex, Inc. 200 South College St. #2000, Charlotte, NC 28202

Software Engineers wanted w/BS & 2 yrs. Exp. in New Jersey. Send resume to: HR Dept., Scicom Americas, Inc., 1500 S. Dairy Ashford, Ste 241, Houston, TX 77077.

Systems Analyst sought by s/ware co. w/expertise in Acctg, Financials & Order Processing to dsgn, dvlp & implmt systems. exp reqd in AS/400, RPG/400, CL/400, DB2/400 & Oracle, VB & Scripting exp a+. Reqd BS in CS/Engg/related area + 3 yrs exp in job offd. Competitive salary & benefits. Reply to HR, Cosmonet Solutions Pvt. Ltd., 406 Farmington Ave, Farmington, CT 06032

Programmer/Analyst / Software Art Corp., a software-consulting firm, requires software professionals with demonstrated hands-on experience in the following: Unix System Admins: Sun/HP Client Server: MS VB .NET, ASP .NET C#/C++/Oracle PL/SQL/Sybase/Windows/Unix / Internet Computing: JAVA/CORBA/XML, JAVA Websphere/Weblogic, OOPQA Testers Manual/Automated, JD Edwards, SAS Programmers, Technical Recruiter local to NJ. Send resume to: nicky@softwareart.com

Software Consulting firm seeks Programmer Analysts. Analyze reqmts, create dsgn documents & translate to prgmg, coding & testing s/ware applics. Must have exp working w/OPUS System (CMAC/mfr), EDI, WebMethods, J2EE, WebLogic, Oracle 8i, PowerBuilder (4.0-8.0), Java, Erwin, Win NT. Competitive salary plus benefits. Req: BS/equiv in CS/related area w/3 yr exp, 2 of which shld be w/in last 3 yrs. Send resumes to HR of Global Technologies Group, Inc., 74 Main Street, Framingham, MA 01702.

Software Engineer. Responsible for designing, developing and testing of distributed financial software applications including researching financial algorithms and software techniques; selecting technologies for projects; developing product prototypes; providing efficient Object-Oriented design; preparing timeline estimates; creating efficient and reusable software with programming languages; and debugging and testing the software to minimize errors at pre-QA stage. Must have Bachelor's in Computer Science, Electrical Engineering or equivalent, two years experience and knowledge of C++ using advanced Object-Oriented techniques, MS SQL Server, DHTML, XML, and Windows 95/98/NT/2000 programming platform and COM/Active X Technology and programming for multiple platforms and creating user-friendly GUI. Send resume with cover letter to: Pennacor, Attn: Bob Butler, 2000 Crosspark Rd., Coralville, IA 52241

Database Administrator 8a-5p, 40 hrs/wk. Analyze data & d'base structure, configure, test, implmt, monitor, do performance tuning, backup & recovery using Enterprise Oracle, Oracle 9iAS, VAX/VMS, Korn shell, Perl & UNIX. Educ: BS or equiv in Comp Sci or Engg, Info Systms Mgmt, Electrical/Electronics Engg or related field. Exp: 2 yrs exp in job offd or as S/ware Engr or Systems/Prgmr Analyst using above computer skills. Resume, Software Decisions Group, Inc., 235 Donamere Way, Alpharetta, GA 30022

Programmer Analyst. Implement S/W, distribute & database appl. Using Visual Basic, Visual C++, Java, .NET & Perl server techn., SQLServer, Oracle & Access & web based appl. On the internet / Intranet. Req: BS in Comp. Sci., Comp. Eng., or related Eng. 40 hrs/wk. Job/Interview Site: LA, CA. Send resume to: Aaxis Group LLC, 6399 Wilshire Blvd. #914, LA, CA 90048

System analysts, Client Server Database Administrator wanted. Qualified applicants must have: 6S plus experience using Oracle database, Unix Sun Solaris, must be authorized to work in US. Apply at St. John Hospital, 22101 Moross Road, Detroit, MI 48236. EOE.

Programmer/System Analyst wanted by GalaxyPlus, leader in tech products to credit unions. Qualified candidates must have at least BS degree. Exp of XML, IBM AIX, Socket/TCP, C, DG SQL, VB, AOS/VS, JavaScript, CSS, DHTML is plus. Apply at: lchsm@galaxyplus.com. EOE

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Senior System Specialist (Boston, MA) responsible for leading design, development, maintenance, and documentation of Web portal. Will lead analysis, system design and system architecture, program in Java, JavaScript, C/C++, and Oracle; identify areas of risk and present mitigation plans; demonstrate expert understanding of systems design and development, technology support, and data processing standards; provide consulting services for technical business opportunities; train business units; and assist junior staff. Minimum requirements: Master's in Computer Science, Engineering, or related field. No experience necessary. Will also accept Bachelor's +5 years progressive experience in field. Must have unrestricted authorization to work in U.S. M-F, 9am-5pm, 40+ hrs/wk. Salary range: $85,800 - $119,500/yr. An EOE. Send 2 copies of resume to Case No. 200115597, Labor Exchange Office, 19 Staniford St., 1st Fl., Boston, MA 02114.

System Specialist (Boston MA) responsible for design, development, maintenance, and documentation of business systems. Will engage in analysis, system design, and system architecture, utilize Java, JavaScript, C/C++, and Oracle; demonstrate thorough knowledge of systems, interfaces dependencies, service level requirements, operational functions, business products and services supported; provide consulting services for technical business opportunities, and train business units. Minimum requirements: Master's in Computer Science, Engineering, or a related field. No experience necessary. Will also accept Bachelor's +5 years of progressive experience in field. Must have unrestricted authorization in work in U.S. M-F, 9am-5pm, 40+ hrs/wk. Salary range: $75,000 - $90,000/yr. An EOE. Send 2 copies of resume to Case No. 200115535, Labor Exchange Office, 19 Staniford St., 1st Fl., Boston, MA 02114.

SOFTWARE ENGINEER to design, develop and deploy multi-tier application software using EJB, JSP, HTML, XML, XSL, Java Servlets and Oracle on SUN Solaris and Windows platforms. Install, configure, set up, tune and maintain applications and web servers on SUN Solaris platforms using BEA Web Logic Server, Java, UML, OOAS, XML, Kom Shell, iPlanet Web Server and C++. Require B.S. degree in Computer Science, an Engineering discipline, or a closely related field with five years of progressively responsible experience in the job offered or as a Programmer/Analyst or Programmer. Extensive travel on assignment to various client sites within the U.S. is required. Competitive salary offered. Send resume to Roz L. Alford, Principal, ASAP Staffing LLC, 3685 Holcomb Bridge Rd., Norcross, GA 30092; Attn: Job SM.

SOFTWARE ENGINEER to design, develop and implement web-based application software and user interfaces using Visual Basic, VS.NET, ASP.NET, C#, VB.NET, ADO.NET, XSD, Active X, COM, DLE-DB, ODBC, COM+, ADO, ASP, VBScript, JavaScript, VBA, XML, XSLT, HTML, DHTML, TOAD, PL/SQL, Visual InterDev, IIS, MTS and Visual Source Safe on Windows platforms. Design and develop various web-based reports using Crystal Reports, Oracle and SQL Server. Require Master's degree in Computer Science/Engineering, Mathematics, or a closely related field with two years of experience in the job offered or in the related occupation of Programmer/Systems Analyst. Extensive travel on assignment to various client sites within the U.S. is required. Competitive salary offered. Apply by resume to: Leena Bhalla, Alpha Computing Solutions, LLC 5865 Jimmy Carter Blvd., Suite 125, Norcross, GA 30071; Attn: Job KB.

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Seeking IT Professionals

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- Software Engineers

Experience and skills in most of the following areas are required:

Java, J2EE, EJB, .NET, ASP, VB, VC++, XML, BroadVision, WebLogic, Sun Enterprise/Ultra/Sparc, SQL*Plus, PL/SQL, SQL*Loader, Oracle Forms and Reports, Oracle Applications viz. Financial, CRM.

BS, BE, BTech, MS or MCA, with good understanding of programming, web technologies and databases are essential. At least three years of prior industry experience is a must. Excellent communication and presentation skills a must. Applicant must be open to frequent travel and relocation. Send resumes to Attn: Human Resources at 3730 Gerard Road, Ellicott City, MD 21042. NO PHONE CALLS PLEASE.

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Manager Computer Operations-Glendale Heights, ILL area. Directs and coordinates activities of workers engaged in computer operations. Plans and develops policies and procedures for carrying out computer operations. Meets with subordinate supervisors to discuss progress of work, resolve problems, and ensure that standards for quality and quantity of work are met. Adjusts hours of work priorities, and staff assignments to ensure efficient operation, based on work load. Reviews daily logs and reports to detect curing slowdowns or errors, using computer terminal. Consults with software and hardware vendors and other establishment workers to solve problems impeding computer processing, consulting and training. Meets with users to determine quality of service and identify needs for training. Meets with data processing managers to determine impact of proposed changes in hardware or software on computer operations and services to users. Evaluates new software and hardware to determine usefulness and compatibility with existing software and hardware. Evaluates proposed data processing projects to assess adequacy of existing hardware, and recommends purchase of equipment. Develop budget and monitors expenditures. Minimum qualifications Bachelors degree with major field of study in Accounting,Business Administration, law, or computer science., 2 yrs related occupation in Business Administration, accounting or software Dev 40 Hrs/wk 9:00 am to 5:00 pm, OT n/a, salary $87,402/yr Applicant must show proof of legal authority to work in US Send resume to ILLINOIS DEPARTMENT SECURITY, 401 SOUTH STATE STREET - 7 NORTH, CHICAGO, ILL 60605 attn LEONARD BOKSA referenced V-IL 34153-B An employer paid AD NO calls - send 2 copies of Both resume & cover letter

SENIOR PROGRAMMER/ANALYST (2 positions) to lead a team in the analysis, design, development, testing, implementation and support of cross-platform architecture bridging operating systems, including UNIX and Windows NT for distributed application development and cross browser environments using UML, Java, C, C++ lex, yacc, bison, Perl, UNIX Shell, XML, Servlet, EJB, J2EE, CORBA, DHTML, JavaScript, Orbix and Oracle; Mentor junior programmers. Require Bachelor's degree in Computer Science, an Engineering discipline or a closely related field with two years of experience in the job offered or as a Systems Engineer. Extensive travel on assignment to various client sites within the U.S. is required. Competitive salary offered. Send resume to: Roz L. Alford, Principal, ASAP Staffing LLC, 3685 Holcomb Bridge Rd., Norcross, GA 30092; Attn: Job PS.

System Specialist (Boston, MA) responsible for design, development, maintenance, and documentation of business systems. Will engage in analysis, system design, and system architecture; utilize Java, JaveScript, C/C++ and Oracle; demonstrate thorough knowledge of systems, interfaces, dependencies, service level requirements, operational functions, business products and services supported; provide consulting services for technical business opportunities, and train business units. Minimum requirements: Master's in Computer Science, Engineering, or a related field. No experience necessary. Will also accept Bachelor's +5 years of progressive experience in field. Must have unrestricted authorization to work in U.S. M-F, 9am-5pm, 40+ hrs/wk. Salary range: $70,000 - $90,000/yr. An EOE. Send 2 copies of resume to Case No. 200115536, Labor Exchange Office, 19 Staniford St., 1st Fl., Boston, MA 02114.

Software Engineer Duties: Resp for testing & verifying code for telecom. PCS IT AD testing lab using automated software testing tools. Support testing activities for bay develop efforts. Develop & maintain test guidelines, test cases & test scripts. Determine test requirements & coord test scheduling. Perform systems integration tests & load testing using Segue Silk & Rational Test Studio. Requires: B.S. in Comp. Sci., Eng. or a related field & 2 yrs. exp. in the job offered or 2 yrs. exp. as a Tester, Analyst/Prog. or Prog. Will accept any comb. of educ. & exp. equiv. to a B.S. degree. Con-current exp. must incl. 2 yrs. exp. testing & verifying code & 2 yrs. exp. performing systems integration testing. Send resume (no calls) to Danielle David, CTG, Inc., 13220 Metcalf Ave., Ste. 140, Overland Park, KS 66213.

COMPUTERIT
Information Systems Specialist, Memphis, TN: Req a Bachelor's degree (or equiv foreign educ.) in Computer Science or Computer Information Systems and 2 yrs. of exp. in the job offered or 2 yrs. of exp. in programming and systems analysis for VAX computer systems, including development and implementation of programs using VAX DCL and FORTRAN on Virtual Memory System (VMS). The like of Bachelor's degree will accept 2 additional yrs. of the exp. and 2 years of university-level credit in any scientific or technical field.) Two yrs. of exp. must have involved programming and systems analysis in a manufacturing environment, and using DEC-FORMS and embedded SQL. Engage in programming and systems analysis for VAX computer systems, including development and implementation of programs using VAX DCL and FORTRAN on VMS, in a manufacturing environment. 40 hrs./wk., 8:00 a.m. - 5:00 p.m. Send resume to Melanie Russell, International Paper Company, 4070 Willow Lake Blvd., Memphis, TN 38118. EOE. Reference #0819 when applying.

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AS/400 Programmer/Analyst. Req. Bach. degree or equiv. foreign educ. in Engineering or Computer Science & 2 yrs. exp. in job offered or 2 yrs. exp. using RPG II,E. & CL programming languages in analyze & design business applications in an AS/400 environment. At least exp. must include serving as primary technical liaison with application end-users. Must have one year's exp. in each of the following: devel. of order processing & inventory mgmt. apps. for use in mainframe environ., & use of BPCS, FTP & Lotus Notes apps. (Exp may, but need not, be concurrent.) Utilize RPG, II,E. & CL programming languages to analyze & design business applications in an AS/400 environment. Serve as primary technical liaison with application end-users 40 hrs./wk. Apply or resume to Manager, Human Resources, Unimin Corp. 258 Elm Street, New Canaan, CT 06840. Please reference Job #4269.

Software Engineer - Dev & dsgn comp software relating to MS comp networks used in telecom industry in S. & Latin America. BS in Electical Engineering, knowledge of MFC, MS.net Architecture, visual C++, and Biztalk Server reqd w/ 2 yrs exp. Apply to Personnel, Emida Managed Systems, LLC, 2200 S. Dixie Hwy, #603, Miami, FL 33133.

Software Engineers needed. Several senior level positions available for qualified candidates possessing rel. work exp. Part of the req. rel. work exp. must include 2 years working with C, Java and Delphi. Duties include: designing and developing software applications; programming Avaya definity switching and providing technical support. Experience with Informix, JMF & Dialogic API's a plus. Mail resume, references and salary requirements to United Marketing Group, 929 N. Plum Grove Rd., Schaumburg, IL 60173.

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ENGINEERS: Quality Control Engineers needed. Seeking qualified candidates possessing MS/BS or equiv and/or rel. work exp. Part of the req. rel. work exp. must include 2 years working with FDA GMP regulations and ISO 9000. Duties include: Developing and implementing quality assurance, control procedures and methods; performing quality analysis, calibration & validation of equipments & Visual & Digital Color Matching & Formulation for color coated Tablets using Spectrometer and Color Software. Mail res., ref and sal. req. to: Alpro Inc., DBA Allied Process Corp., 8555 Tonnelle Ave., #306, North Bergen, NJ 07047.

Programmer Analyst, varying job sites throughout the US. Design, develop, implement and analyze client-specific software and hardware requirements using SAP as the client server base with Oracle as the Database and UNIX as the operating system. Three yrs. exp. in job required. Send resume to L.R. Target Resources, 96 East Ave., Norwalk, CT 06851.

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Obstacles Hinder IT Portfolio Management

Investment-tracking approach draws interest, however

BY THOMAS HOFFMAN
SAN DIEGO

MANY IT managers are keen on the notion of setting up a portfolio management approach to help gauge the value of technology investments. But those who try to do so often run into start-up problems, such as trouble getting buy-in from business units, according to attendees at a Meta Group Inc. conference here last week.

Several attendees also said they fear that making information about the financial value of investments readily available could make them seem like IT police in the eyes of business managers who fund projects. In addition, they cited concerns that the data might not be fully accurate.

Like other IT executives interviewed at the Metamorphosis conference, Jim Larkin said he thinks his company's business-unit leaders "could benefit from seeing how technology is being used and the kinds of payback we're getting."

Larkin manages application development information systems at SRP, a Tempe, Ariz.-based utility that spends about $100 million a year on IT. "We'd like to put an IT portfolio management practice in place, but we're struggling with how to pitch this to senior management," he said.

A growing number of companies are adopting the portfolio management concept, in which IT projects and assets are evaluated in much the same way that financial portfolios are [QuickLink 31864].

At the conference, Meta released the results of an e-mail survey it conducted last month with 219 prospective attendees. A total of 56% said they have either launched an IT portfolio management program or plan to do so.

Some organizations "are doing IT 10-Qs and IT 10-Ks" that are equivalent to the monthly and quarterly financial updates that publicly held companies have to file, said Howard Rubin, executive vice president at Stamford, Conn.-based Meta. The reports present financial breakdowns of IT investments that are in the pipeline as well as existing systems, he added.

But such disclosures can pose a problem for IT managers. "Some find the visibility of the portfolio very threatening," said Mike Metcalf, vice president of marketing at Pacific Edge Software Inc., a vendor of IT portfolio management tools in Bellevue, Wash. "They feel the data they have isn't as accurate as it should be, and they're being asked to share this information at a very high level."

Dan Jones, senior director of customer-facing systems at ConAgra Foods Inc., said the Omaha-based food processing company is "doing some components of IT portfolio management, but we probably don't call it that." For example, ConAgra has implemented systems for use in tracking its IT assets, Jones said.

Sun Microsystems Inc. launched an IT portfolio management initiative about six months ago. "One of the challenges I'm facing is finding a [software] tool that meets our needs and runs on Solaris," said Halina Tabacek, manager of IT planning and practices at Sun. ▶

Tips on launching an IT portfolio management program:

SHOW business managers how the initiative could help reduce their technology costs.

DIVE INTO the biggest slices of the IT pie first. Evaluate technology budgets by business unit and by project.

FOCUS ON the right metrics and choose appropriate IT portfolio management tools.

BE SURE to track IT workers and evaluate how they can best be allocated to projects.

Continued from page 1

Kaiser

its own automated record system. David O'Grady, a Kaiser spokesman, said the HMO started that project in the mid-1990s because comprehensive off-the-shelf software didn't exist then. Versions of the internally developed system have been rolled out in states such as Colorado and Hawaii.

But Epic has developed its software to the point that Kaiser officials believed it would be more cost-effective to switch, O'Grady said. He wouldn't disclose what Kaiser has spent on the initial project but said press reports in the 1990s pegged the expected cost at close to $1 billion.

IBM spokesman John Bukovinsky said his company has worked with Kaiser on a number of successful projects and expects to continue to be involved in IT work at the HMO, which uses IBM's systems and its DB2 database.

Andy Wiesenthal, associate executive director of the Permanente Federation, the national governing organization for Kaiser's medical groups, said it's expected to take three years to fully roll out the new system to the health plan's facilities, located in nine states and the District of Columbia.

When it's completed, the system will let Kaiser's health care workers electronically access the records of any patient, Wiesenthal said. In addition, health plan members will be able to use the system via the Internet to schedule appointments, seek referrals or request prescription refills.

Kaiser hasn't finalized the system's topology, said Wiesenthal. But, he added, the electronic medical records will be housed in Kaiser's Corona, Calif., data center and tied to servers in the facility that will handle processing for different regional operations. Kaiser officials should decide by the end of this month whether to use thin-client terminals or PCs and workstations to provide access to end users, Wiesenthal said.

Carl Dvorak, Epic's chief operating officer, said the company's software can store 45,000 data elements that cover all aspects of patient care. Dvorak added that Kaiser's system will manage all end-user interactions through Caché, a multidimensional database developed by InterSystems Corp. in Cambridge, Mass., for use in transaction-processing applications.

It's unusual for a large health care organization to rely so heavily on one vendor, said Ralph Reyes, senior vice president at Klas Enterprises LLC, an Orem, Utah-based company that measures the performance of health care IT systems. But, Reyes added, Epic has topped Klas' list of more than 200 IT vendors for the past three years, based on performance reports from 3,500-plus health care facilities.

Thomas Handler, an analyst at Gartner Inc. in Stamford, Conn., said the Kaiser deal poses a challenge for Epic, which has annual revenue of about $100 million and hasn't worked on such a large-scale project before. But if the rollout succeeds, it will put pressure on other health care providers to deploy paperless record systems, he added.

Francis J. Crosson, executive director of the Permanente Federation, said the Epic system will help Kaiser satisfy all the requirements of the federal Health Insurance Portability and Accountability Act, due to take effect in April. ▶

Technology Details

Kaiser Permanente's automated medical record system will:

- Cost $1.8 billion to develop and contain data about all of the company's health plan members, who currently number 8.4 million.
- Be based on software from Epic Systems that integrates a data repository and reporting tools with clinical, billing and scheduling applications.
- Store records electronically at a central data center and use InterSystems' Caché multidimensional database to manage transaction processing.

MORE THIS ISSUE

Be careful when choosing tools - many are little more than project management packages. **Page 25**

POWER USERS

Meta predicts that IT spending in the energy industry will drop this year, but some technologies are ripe for growth.

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FRANK HAYES ▪ FRANKLY SPEAKING

Tough Stuff

INFORMATION TECHNOLOGY ISN'T EASY. It never has been. Sure, it looks easy when vendors trot out their product presentations. It sounds easy when pundits and analysts tout technologies they've never tried. It even seems easy when we confidently set our project schedules and lay out for business-side managers how quickly they'll get a return on an IT investment.

Rigged demos and dazzling dog-and-pony shows are easy.

Actually making IT work isn't. It's really, really hard.

It's hard because products don't work. And technologies are misapplied. And costs are hidden. And requirements are underestimated. And admitting failure is political suicide.

It's hard because half the time, we don't know what we're doing — we're trying to solve problems in new ways, with uncertainly implemented technologies, in the face of shifting or incoherent user requirements. And the rest of the time, we *know* the products we're using won't really do what we need, but we still must try to make them work.

And it's hard because, as people who believe in technology, we're optimists. We believe products will work the way they're supposed to, integrate with our systems as easily as we'd like and meet the needs of users without a hitch. With each new project, we're full of hope that this time everything will be right.

But out in the real world, it almost never is. And the newer our technology, the more ambitious our goals and the more important our projects, the harder IT gets.

Which we keep discovering when we spend years instead of months implementing enterprise software. And when we run up against endless obstacles getting a data warehouse or application integration or Web services working. And even when we fall far behind in installing critical security patches and bug fixes.

Nothing works the way it's supposed to. Nothing plays nicely with what we've got. Nothing is as simple as we were told it would be.

If all this sounds unremittingly grim, keep in mind that we actually do deliver lots of projects. We do get SAP working, eventually. We do build distributed applications, even though it takes buckets of sweat and shaves years off our lives. We do solve business problems and keep users increasingly productive, even though it always takes longer than it should.

But are our expectations unreasonably high? Sure they are — fueled today not just by vendor sales promises, but also by glossy TV commercials, breathless magazine articles and wishful management thinking. And there's not a lot we can do to reduce those expectations.

Still, we have to try.

We can do that by educating business-side executives and managers in just how easy IT isn't. That may help a little. It's not much, but at least it's something to compete against all the voices outside and inside your organization chanting that this new product or that cutting-edge technology is a sure thing, a silver bullet and, above all, easy.

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FRANK HAYES, *Computerworld*'s senior news columnist, has covered IT for more than 20 years. Contact him at frank_hayes@computerworld.com.

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But if we — and the people whu use our systems — understand that, we'll have a better chance uf success in making IT wurk, just like those vendurs and pundits and users say it should.

Or we'll even make it look easy. ▸

That Would Explain It

When a help desk pilot fish opens this e-mail, there's no subject line or message – just a From: and a To: address. Fish shrugs and deletes it, but 15 minutes later, he hears from the user asking why he hasn't responded to her request. There was no message, fish points out. "It was a request to fix my keyboard," says exasperated user. "I can select 'help desk' from the list with my mouse, but the keyboard isn't working."

That Stinks

SHARK TANK

"Do you have any extra printers?" store manager asks support pilot fish. Sure, is yours broken? fish asks. "No, but a week ago, a mouse got in it somewhere and died," manager says. "It was smelling, so we put some air fresheners on it. But now those aren't working either, and it's smelling up the store and making the customers sick."

Going Both Ways

User explains to sys-admin pilot fish that she needs to temporarily link two laptops to transfer some files. You can use a cable or the infrared ports, fish explains. "In her best pleading-for-help voice," fish reports, "she asks to borrow an infrared cable."

Both Sides? No

Callers on hold to this travel agency no longer hear music, so support pilot fish tracks down the trouble: After two years of continuous play, the CD player has died. The CTO replaces the machine herself, but there's still no music. Fish checks: She didn't push the Play button. Now it's set to play continuously, fish explains. "Hmm, I think that might get kind of boring for our clients," CTO says. "Do you think we should turn the disc over once in a while?"

A Network of One

Company orders $8,000 podiums for training classrooms, and they're very snazzy, says pilot fish who works there: Each includes a networked PC with touch screen, wireless mouse and projector. "Our business folks also bought the optional software that allows the instructor to browse the student machines to check their progress," fish says. "The catch is, the total number of PCs in each training room is one – the instructor's!"

Aha!

User at a remote site suddenly can't log onto her laptop – her NT account seems to be missing or corrupted. So support pilot fish arranges for her to drive to the nearest office with her PC, check in with security, borrow a docking station and connect to the network. "She finally gets logged on," fish says, "and we find the real problem: She's picked up someone else's laptop."

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